THE
Medical Times and Register

A BI-WEEKLY JOURNAL OF MEDICINE AND SURGERY

EDITED BY

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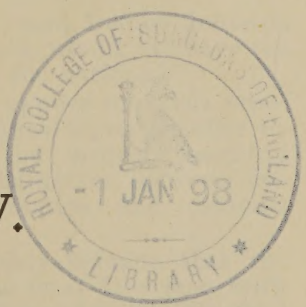
Dorchester, Boston, Mass.

PUBLISHED BY

The Medical Publishing Co.

717 Betz Building Philadelphia, Pa.

JOSEPH R. CLAUSEN. A. M., M. D., Business Manager



VOLUME XXXIV.

July 1st to December 31st, 1897

ROYAL COLLEGE OF SURGEONS OF ENGLAND
22 JUL 97
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The Times and Register.

VOL. XXXIV. No. 1. PHILADELPHIA AND BOSTON, JULY 10, 1897. WHOLE No. 941.

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Original

THE PROBABLE FUTURE OF THERAPEUTICS.

BY JAMES ROBIE WOOD, M. D., LL. D., NEW YORK.

PART IV—GENERAL THERAPEUTICS.

A.—Justice to Medical Benefactors.

B.—Medical and Surgical Colleges of the Future.

C.—Restoration of Ancient Systems and Medicines in Improved Forms and Applications.

"If there be a crime of deeper dye
than all the guilty train of human vices
'tis ingratitude."

UNGRATEFUL EXPERIENCES ABOUT OUR BENEFACTORS.

Doctor Samuel Johnson was present at a large tea party when Master M., who had been plaguing several of the guests, said to his mother that he would be good if she would give him an apple.

"My dear child," said the parent, feeling herself in the presence of a great moralist, "you ought not to be good on any consideration of gain, for 'virtue is its own reward.' You ought to be good disinterestedly and without thinking of what you are going to get for it."

"Madame," said Doctor Johnson, "you are a fool; would you have the boy be good for nothing?"

This aptly applies to recent utterances of persons whose peculiar interpretation of medical morality makes no distinction between dishonorable practice and common justice.

Some selfishly demand that the results of the most laborious work of men of brains and originality shall be freely given for the use and profit of physicians, without other compensation than honorable mention, and even this empty honor is often rendered only under the compulsion of public opinion. In the words of Sam Johnson, such fastidious moralists

insist that human benefactors shall be "good for nothing!"

For many years scores of able, painstaking and indefatigable scientists in Europe have given their best energies for the advancement of medical knowledge. In some cases these men have resigned lucrative practice in order to devote mind, heart and soul wholly to their noble vocation.

Of these, one to whom the world already owes a debt of perpetual gratitude has recently offered to the profession a new tuberculin. He has clearly and minutely explained every step in its preparation, and he very properly proposes, instead of permitting Tom, Dick and Harry to destroy its usefulness and his own good name, that it shall be correctly prepared under his personal supervision by certain eminent chemists. For this grievous sin these medical pharisees cry out in holy horror: "Koch & Co."

Surely there must be a Zulu in the jungle!

Possibly some extensive drug and serum producers are not averse to continue reaping great profits, as they have in the past, from medical brains which are seldom, if ever, paid for, except perhaps by an occasional unremunerative "thank you." What wonder is it that they and their satellites are deeply offended and morally shocked when one of the ablest medical men of the age presumes to ask for a slice of his own bread. For this heinous crime they infamously endeavor to associate his glorious name with the lowest of patent medicine venders.

After what Pasteur, Koch, Behring and the forgotten isopaths have done for us we should hiss down such surly thanklessness and teach these cavilers that such "ingratitude is treason to mankind."

If our desire to benefit the sick is earnest, and this new tuberculin is proved to be valuable, let medical men unite to persuade the central government at Washington, or their individual States, to award several hundred thousand dollars to Koch for the free use of his tuberculin for the benefit of Americans who are too poor to pay for it.

Why should we permit our sick to depend upon the almost boundless charity of the German Empire, which so generously rewards brains to sustain science, while our own Government does comparatively little for science or art?

COLLEGES OF THE FUTURE.

Were it not for most ignoble jealousies and prejudices the united strength of physicians and others of all schools could induce our national Congress to establish one of the grandest homes for the sciences that was ever founded by man.

Such an institution, perfectly equipped for laboratory and other scientific work, can, by the strong inducement of princely salaries, gather from various parts of this and other countries a magnificent concourse of talent.

A COLLEGE OF PROFESSORS.

Therein may also be established a "College of Professors," where physicians, surgeons and others who aspire to professorships may, after some stated term of practical medical or other experience, undergo severe ordeals in laboratory and other work, according to their intended future duties, before being allowed to present themselves as candidates for medical, surgical or other scientific professorships.

Exceptions, of course, should be made for the benefit of those rare geniuses who, while possessing valuable and peculiar ability in one direction, are of but small capacity in others. Such as these may be appointed to act as special teachers in their individual work.

It will be necessary that the living and all other expenses shall be defrayed by the States or National Government for those whose qualifications entitle them to admission.

There should be a careful yearly elimination of deficient persons, and transference to departments best suited to the capacity of each student. By such means only can we ever hope to crush out nepotism and general favoritism, which now exclude invaluable talent from all schools.

There should also be departments in this educational centre wherein every thought or idea which has any

possible therapeutic or other value will be respectfully and conscientiously considered, however humble its origin. There no timid thought nor once despised idea will be sneered and sneered at and then fondly embraced as one long honored and dearly loved, as has been the amazing history of the principles involved in antitoxins.

It will also be the duty of the "College of Professors" to decide as to whom honor shall be given for new discoveries or the development and rehabilitation of old or neglected useful ideas.

Upon such persons will be conferred diplomas and medals announcing their right and title to especial distinction. This will tend to diminish the temptation to hide profitable discoveries, as a very large proportion of scientific men are willing to sacrifice profit for honor, when honor is assured.

Such honorable distinctions may be first declared upon certificates of right of priority or other claims, and later, after the claims have been successfully defended and sustained for a specified period, then the final or grand diploma shall be publicly conferred, and the recipient at the same time decorated with the great medal of the legion of medical benefactors.

Those thus honored for their restoration of what is sound in ancient medicine, or for the development of original medical or surgical ideas, may bear the distinguishing title of M. R. D. (Medicinal Redintegratae Doctor). and words similar to the following inscribed upon their diplomas: "Qui sanas veterum dui oblivioni datas redintegravit, novasque ad homines sanandos vias ipse stravit."*

*Note.—Who restored the sound ideas of the ancients which had been for a long time consigned to oblivion, and who himself paved new ways for healing mankind

For, after all, very many of the so-called new ideas are but a rejuvenation of the old.

There was prophesied in a former paper the probable future division of the profession, the surgeon being taught in specially instituted colleges of surgery and the physician in schools devoted wholly to medicine, the diplomas distinctly declaring each specialty. Then neither may encroach upon the domain of the other, but both degrees may be held and used by any person who has time and ability to earn them.

Favoritism will doubtless continue to be cultivated in many institutions, but the future will apply every possible safeguard to prevent its rank growth.

The "College of Professors" may, in the coming century, be empowered through the Government or the generosity of individuals to offer most tempting prizes for the best hygienic or therapeutic suggestions or the ablest papers on various medical and surgical subjects. Some of these prizes, amounting to small fortunes, will wonderfully stimulate endeavor all over the country and throughout the world.

The most neglected and apparently trifling subjects will be named for consideration, such, for instance, as the medical ideas and instincts of the savage tribes in all countries, also the remedial instincts of the higher and lower animals, down to reptiles, insects and even lower animal life.

In those coming days it may not be so necessary as in the near past and present, to resort to the daily press to awaken physicians' comatose recognition of old and new truths.

These suggestions are not altogether Utopian, although selfishness and other moral infirmities of human nature may thwart many bright prospects in future years, even as they have in the past.

THERAPEUTIC SYSTEMS OF THE FUTURE.

While anticipating the future by viewing the past in the light of the present, we are struck by the peculiar and often unaccountable undulations of medical opinion. The rise and fall of confidence in systems, men and isolated medical ideas have increased in frequency in proportion to the rapidity of human intercourse.

Elimination as a practical idea has better withstood the storms of ages than any other medical thought, and it has sailed in safety amid the wrecks of thousands of strange fads,

good ideas and peculiar systems of practice. The plain, matter-of-fact idea of "get it out" has always appealed to common sense, and has had even more followers than that sterling one of "keep it out" or prevention.

To the support of this golden rule of elimination, more than to any other precept from the profound wisdom of its learned legions, the great catholic, or, as sometimes called, physiological, school owes its continued existence. Scorning it lost for the school of similars many hundreds of thousands of converts.

Old Doctor Francis, of New York, once humorously said: "My name may not go down to posterity for anything in the arts, sciences or literature that I have accomplished, but as long as men have bowels I shall be remembered through my Triplex Pill."

VENESECTION.

First among the great eliminators were the emetics, cathartics, diaphoretics, diuretics and venesection.

Times were when the lancet was raised on high and the whole medical world knelt in adoration. Blood letting was once so deeply imbedded in the confidence of physicians that those who had the temerity to oppose it were treated as charlatans who were too contemptible to associate with respectable practitioners. But the lancet's enemies steadily increased in numbers until the rush in the opposite direction became one universal rout. While many thousands of lives were jeopardized and even destroyed by excessive use of the lancet, there may have also been other thousands which were sacrificed by its absolute neglect.

The future physician will return to the lancet of our forefathers, but not with their careless cure-all bloodletting. By the results of a more intelligent use of this potent remedy future practice will censure our uncompromising antagonism to the extraction of blood.

While it is true that aconite, veratrum viride, the nitrites and many other remedies, assisted by the accurate application of heat and cold, have efficiently supplanted bleeding in many congestive, inflammatory, spasmodic and other conditions, yet serious cases have arisen where a sufficiently prompt relief could be effected by venesection only.

There are also certain grave conditions wherein the blood is so saturated with poisonous gases or other intoxicants that life would be jeopardized unless quick resort were made to full bleeding and at the same time replacing the diminished volume of blood by rectal and intravenous injections of saline and other solutions. Future physicians, fortified by more exact knowledge of guiding principles, will accurately determine what are proper cases and more skillfully apply to them this most potent remedy.

Of other eliminators the emetics and purgatives may, in a great measure be substituted by more mechanical measures.

Diuretics and diaphoretics, although remaining in the medical armamentarium, may be less freely used, but like all other means, will be applied with infinitely more precision than ever before. But this is to be discussed when special remedies are taken up.

ASEPSIS AND ANTISEPTICS.

Aseptic and antiseptic treatment will be necessarily more thoroughly understood and efficiently applied than in our day. Some of the simplest of ancient antiseptic or disinfecting substances, which we too generally ignore, will in the future be greatly improved and made invaluable to mankind.

CHARCOAL AND SULPHUR.

Very prominent among these stand charcoal and sulphur. Although many imagine that there is nothing more of importance to learn about these two simples, yet the coming century will undoubtedly prove that they deserve a far higher place than we have ever accorded them.

The ancients named sulphur the "godlike," and after an earnest study of this precious drug we, too, may possibly sanction this hallowed name.

When we think of the almost eternal endurance of charcoal, as evidenced by the perfectly preserved charred stakes, taken from the

Thames, which had been driven there by the invading Romans, we may well consider charcoal a fitting companion for the godlike sulphur.

Although theoretically knowing many things about charcoal, yet practically we treat it as a very ordinary and useless affair. If its merits were more carefully examined we would be amazed that it has been so long neglected. The future will place it in a higher position than it has ever held before.

Considering its immense capacity for absorbing gases, it seems strange that physicians have so seldom taken advantage of this invaluable quality of vegetable charcoal.

There are very few, if any, gases that it does not absorb under proper conditions, in quantities varying from moderate to immense amounts, especially when the charcoal is pulverized.

When thinking earnestly of this fact it seems safe to prophesy that in future years the shelves of our pharmacies will be black with innumerable preparations of charcoal impregnated with a long series of gases. To-day we seldom see more than one or two lonely jars of burned willow stick or powdered charcoal.

When physicians realize the dangers, as well as the benefits, of carbo-vegitalis they will not be apt to let their patients supply themselves from the coal bins of plumbers or tinsmiths. In such places its porous body drinks in and retains any foul air present, unless there is sufficient oxygen previously absorbed to neutralize such poisonous gases, and this diminishes the charcoal's future disinfecting power.

Vegetable charcoal freed from oxygen decidedly promotes putrefaction. Flesh or fish placed in such charcoal will decay much more quickly than when exposed without it. Deoxidation may be affected by bringing powdered charcoal to a red heat and then excluding it from the air so that fresh oxygen cannot enter.

Charcoal may also be deoxidized by placing it in alcohol; the oxygen leaves the pores of the charcoal and the alcohol is oxydized to acetic acid.

In the future this purifying quality in deoxidized charcoal may be taken advantage of in certain serious ulcerations, where, as long as any malignant tissue remains it is desirable to promote speedy and, if possible, painless decay.

In order to be able better to judge its probable future applications let us examine the known qualities of charcoal. As we have seen it has no disinfecting power in itself, but acquires it by condensing in its pores oxygen from the air and modifying it to a state of ozone.

If wet for any length of time charcoal loses its value, which can be restored only by drying and bringing to a red heat and again exposing it to the air.

Its power to absorb oxygen and other gases may be very greatly increased by boiling powdered charcoal in a solution of proto- or bichloride of platinum, then firing, as before mentioned, the platinum being decomposed and precipitated in a finely divided form, plates every minute particle of the charcoal, thus enormously increasing the surfaces and intensifying its action in condensing gases.

Bear in mind that charcoal may become surcharged with deleterious gases, so it must not be handled carelessly, for more of such gases may enter its pores than the contained ozone can destroy; therefore under such conditions it may cause disease. This fact will be recalled later when its proper preparation is suggested.

Strong nitric acid slowly oxidizes it to carbonic acid gas. It can also be oxidized by the galvanic current in a solution of sulphuric acid, or potassic permanganate and water. It remains unchanged, at ordinary temperatures, for all ages.

Let us now consider the probable uses which our medical posterity will make of the vegetable and animal charcoals, as well as their manner of preparing them for application and administration in disease. All forms and combinations of this valuable menstruum and medicament will be handled with the same care that is now exercised in preparing aseptic and antiseptic dressings, and as thoroughly protected from all

possible contamination from external sources.

Innumerable volatile substances which vaporize at ordinary temperature will be housed within charcoal, both for convenience of application and in some cases to intesify or change their action, as is seen in its effect upon oxygen.

The fact that there is a vast difference in the proportion of the various gases absorbed has to be taken into account. Ninety times its volume of ammoniacal gas enters its pores, and between nine and ten of oxygen, while much less than twice its volume of hydrogen gas is absorbed by charcoal. The amount will be estimated in every instance, especially those vapors from volatile substances, which may vary largely; and as every drug of this class is likely to be combined for internal as well as external use, most careful studies must be made as to quantity absorbed, as well as the increase or decrease of intensity caused, by each drug's association with the charcoal. It is probable that the vapors of turpentine will be changed within the pores. As every known volatile medicament, and possibly large numbers of those which do not give off these vapors, will be used, it would be impossible to record them.

In a general way we may name the fumes or vapors of creosote, phenol, naphtha, camphor, easily vaporized essential oils which have any known therapeutic value, ammonia, bromine, chlorine, iodine, phiorine, sulphurous acid, carbonic acid, sulphide of hydrogen and many other gases.

To obtain these various medicinal combinations the vegetable coal, as heretofore stated, must be brought to a red heat and then the coal must be kept in vacuo, and when cooled the gases may be forced within the containing vessel.

Jars holding medicated or deoxidized charcoal must be perfectly sealed to prevent oxidation of contents. There may be intestinal conditions where the deoxidized charcoal may be administered internally.

Multitudes of indications for such combinations will appear, especially when the value of external applications is fully appreciated. In some cases, where there is serious objection to the color, feeble gas absorbing substitutes may be found in some of the clays.

It is impossible to enumerate the conditions where, in its crude form and dynamized condition, charcoal and its combinations may be used internally and externally.

Now let us view charcoal as we know it in its simple form, as a medicine per se. It is singular that its real merits are so little known even to those who use its most delicate preparations. It may be so finely subdivided by prolonged trituration that its particles can enter freely even where the blood corpuscles cannot pass.

Some persons are so exceedingly sensitive to certain drugs that severe symptoms are at times produced by inappreciable quantities. During the war our old professor of materia medica in the Medical College of Virginia used to relate as an example his own exquisite sensitiveness to ipecac. He could not enter a pharmacy where, although unknown to him, anyone happened at the moment to be dispensing ipecac but that he was made aware of it by an asthmatic attack more or less severe.

After the drug diffuses itself through the atmosphere of a room it seems to lose the suffocating propensity sometimes observed in a freshly opened bottle. This same peculiar sensitiveness to drug action has been observed by some while taking purely powdered charcoal, and as it has affected many persons who were unaware of its behavior, it is folly to look upon all such manifestations as imagination.

A surgeon in the German army administered internally a few doses of charcoal, which had been very finely ground with sugar of milk, to a soldier who had typhoid fever. Soon there appeared a sensation of coldness, especially of the hands and feet, which ceased when the charcoal was withdrawn. The same symptom has appeared sufficiently often to be justly considered a result of drug action. Yet this peculiar chilliness has also been relieved by charcoal when it has appeared in the

course of disease. The fact that it does not benefit all such cases does not prove that it benefits none.

The future may find reasons and remedies for this supersensitiveness of certain individuals to drug, atmospheric, local and personal influences.

Among a very long list of symptoms produced or relieved, in persons sensitive to its action, in minute quantities finely comminuted with sugar of milk, are looseness or aching of the teeth, sensitive and bleeding gums, at times profuse; hemoptysis and epistaxis, occasionally periodic in their return; therefore it would seem indicated in intermittent affections, with or without fever.

Thoroughly triturated in combination with quinine, in the future it may be used to enhance quinine's antiperiodic effect and at the same time mitigate some of its unpleasant symptoms.

In delicate triturations it has caused and benefited flatulent distension of the abdomen even better than when large doses of the crude drug were used. Hoarseness and even aphonia have often been improved under its use. Certain forms of blood stasis have been both caused and relieved by triturated charcoal; also painful swelling of the lymphatic glands, especially the cervical. But this effect on the glands is more marked under the action of animal charcoal. Those who are most influenced by charcoal are persons of lymphatic constitution, aged asthmatics, persons of low vitality or debilitated by exhausting diseases. These are but a very small part of the conditions where it may have a remedial action when used in its dynamized form.

It has also proved of value in counteracting the effects of tainted meat or fish, rancid fats and conditions developed by salt meats, first, by its chemical and absorbing qualities in its crude form; then by its more delicate action upon the lymphatic and other systems, which are observed only under the use of triturations.

Of the immense number of striking symptoms recorded as having been produced by charcoal, there are many which the more careful and thorough provings of the future may drop from the list. How studies of the materia medica may be conducted in coming years will be suggesetd in a later paper of this series.

As its receptive power is great and its particles so well adapted to assist sugar of milk in comminuting various vegetable and mineral drugs, it will assuredly be extensively used in the preparation of medicines. Volatile medicaments would be retained among the atoms of charcoal far better than in the commonly preferred milk sugar, but a combination of both would prove more desirable in preparing drugs containing such volatile matter. Probably the remedial power of many drugs would be better retained in such a menstruum. In some cases the first trituration might be made wholly with charcoal and then the finer preparations continued from this with pure sugar of milk. The following experiment can be tried by anyone: Take one part each of animal charcoal, vegetable charcoal and sulphur (or in correct proportions other remedies may be used, such as arsenic, mercury, iron, quinine or any other medicament); then add 30 to 50 parts of sugar of milk. Grind these thoroughly together in as large a mortar as convenient 15 or 20 minutes at intervals, as time and strength will permit, until this trituration has continued for three to six hours, or even more.

Take care that this is done in a room free from contaminating gases. Do not leave the powder exposed to dust, and when finished keep it in tightly corked bottles. As an alterative resolvent and antiseptic the sulphur combination will have an extensive value.

Another condition is developed by prolonged trituration, which will be considered later.

Of such triturations it is not well to use ordinary doses, for it should be remembered that this prolonged pulverizing intensifies drug action by making absorption far more rapid. It may be found necessary to add a great deal more milk sugar

for sensitive persons. This plan of triturating with charcoal and sugar of milk can be extended to many drugs in common use, remembering always that in a few persons some of the peculiar symptoms of the charcoal itself may be witnessed.

It may be preferable, for the absorbtion of gases or for triturating with various volatile and other drugs, in order to avoid what is considered drug action, to use pure carbon from burned oil, which serves a better purpose. To obtain its medicinal action it is better to use ordinary wood charcoal, containing, as it does, silica, potassa and other salts, which are probably important therapeutic factors.

As this article has been carried beyond its allotted space, animal charcoal and sulphur are left for the next paper.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

THORACIC TUMORS.

THORACIC TUMORS, INVOLVING THE WALLS OF THE THORACIC CAGE AND ITS INTERIOR.

Exclusive of mammary growths in the female those resting on or involving the walls are comparatively rare.

The most common are fatty tumors, which are most frequently lodged in the subcutaneous tissues in the dorsal areas.

Sometimes we will encounter in the adult, over the upper thoracic zones, cystic formations, which periodically open, discharge, close in, to again, after varying intervals, reopen.

They possess many features in common with a "cold abscess or tubercular sinus, which has its origin in a deep-seated suppurating lymphatic gland or diseased bone. There are bronchial clefts, the inclosed Wolfian ducts of the fetal mesoderm being continuous with the mucous surface of the oesophagus, the trachea or endothelia of the pleural surfaces.

A singular clinical peculiarity about them is that they seldom appear anywhere until after puberty.

One of the most valuable aids in the diagnosis of them is a microscopical analysis of their secretions. By this means, with the aid of cultures, or inocculations if necessary, we may readily determine the specific character of the bacterial elements, and trace their histological cells to their source. This was well illustrated in a case which came under my care at the West Side German Dispensary in January of this year.

Just above and to the inner side of the breast and the outer side of the nipple of the left breast was a large fungating mass, periodically discharging an ichorous and purulent material.

The patient was a man past 50, who had been a soldier with the French army in Algiers. About a year after he left the service he began to complain of pains in the left intraclavicular region, extending downward toward the nipple.

Some months after this he noticed a small lump under the integument, which later inflamed and opened.

When he came under our notice the centre of the sore was raised and then extended in a circular direction, a stellated series of scar-like lines, fading away as they extended outward.

He had some cough and darting pains extending through thorax backward, especially when he made

any severe muscular effort or used the left arm. Physical signs pointed to involvement of the left lung.

This case presented many very complex features. He came of a tubercular family; he had had syphilis, and gave a history of sustaining a severe fall on the left shoulder on board a ship. The intermittency of the discharge, with probable connection with the respiratory apparatus, led to the suspicion of a cleft.

The gross appearance of the ulcer, with many other features of the case, inclined me to regard the case as one of actinomycosis. In order to decide the question three separate examinations of the discharges were made, when actinomyces in large numbers were found.

The case was now vigorously treated by the iodides and arsenic.

A saturated solution of iodide of potash was injected immediately into the mass and administered freely simultaneously internally with arsenic. Recovery has been complete and permanent. All the inflammatory hyperplasia has cleared up, all tumifaction disappeared and clean union of the parts secured.

His general health is re-established and once more he is able to work every day at his trade of a carpenter.

In this class of cases exact diagnosis is the key to successful treatment, with few exceptions. Closely allied to this type of neoplasm, though of an altogether different class, is another of an infectious origin, of common occurrence and always easily recognized. This carbuncle, which, though oftenest met with over the cervical vertebrae, is not infrequently lodged on either side of the spinal wall of the thorax.

Carbuncle is not classified with tumors because its development is not attended with the presence of new histological elements, as its evolution is attended only with turgesence, hyperplasia, suppuration, sloughing, loss of substance and cicitrization.

But if infection by any of the fission fungi is entitled to a place among tumors, so does that dependent on the streptococci, as anthrax.

My purpose in introducing it here is not so much with a view of enlarging the already numerous list of new growths as to introduce a practical point in the therapy of carbuncle, which, when it pursues an uninterrupted course, is always a painful affection, and sometimes even dangerous to life.

At first a carbuncle begins by a papillary inflammation of a very limited area, but with time it gradually expands, becomes hard, hot and painful, when central suppuration and sloughing begins.

At this stage constitutional changes are manifest, there is a tendency to the pyemic state. If now, circumstances permitting, the furoncle be deeply scarified or excecated local and constitutional symptoms abate and the work of repair begins.

But we have the means of aborting these terribly painful masses in every instance if applied early, and dispensing with any mutilating operation in all.

This is all the the more acceptable because it dispenses with the need of anesthetics, cuts short the course of the malady and may be safely util ized by any practitioner.

Society Reports.

OBSTETRICAL SOCIETY OF CINCINNATI.

OFFICIAL REPORT OF MEETING OF JANUARY 21, 1897.

The President, Rufus B. Hall, M. D., in the Chair.

E. S. McKee, M. D., Secretary.

PRESENTATION OF SPECIMENS.

Dr. Thad. A. Reamy—I present this dermoid, not that I suppose it presents in itself any very remarkable features; it has the characteristics of all dermoids. This bunch of hair is only about one-half the quantity that was in it. The tumor has not been critically examined as to the bone that is here, but there is no doubt about it being bone. There are some interesting features connected with the history of the case. Here are two cysts. Possibly there was but one, and this neck may have been made by the adhesions. The tumor was removed last Saturday from a patient aged 58 years, the mother of several children. The last child was born 16 years ago, and the tumor attained, according to the patient's statement, two-thirds of the size it was when I operated on her about 14 years ago. The tumor commenced to develop 15 years ago, growing slowly, and nothing was done for it until the patient went under treatment about a year ago, and about six months ago the case was placed in the charge of a gentleman who, according to the statement of the patient, had a hospital and treated the case by electricity and various other means, and who tapped it five times within the last six months. It was tapped twice within the last six weeks prior to the time the patient came under my charge. A very interesting feature about the case, so far as the ethics go, is that at the last tapping the physician obtained a tuft of hair which, under ordinary circumstances, would have been sufficient to indicate to the operator that at least it was not a tumor that could be dispersed by massage and electricity. The tumor was of the right ovary, but the meanest attachment I had to deal with was with the rectum. The tumor was also attached to the sigmoid flexure. It was with a great deal of difficulty I could dislodge the tumor, and there was considerable hemorrhage that I could not control by the ligatures. The pedicle was quite small. There was some oozing, which I controlled by putting in a little packing of iodoform gauze, which was brought out of the abdominal wound. The patient has had no temperature. I examined the stitches to-day, the fifth day, and there seems to be union everywhere. I removed the gauze early, because I felt the hemorrhage did not demand that it should remain and I did not want its interference with the union. It is rather unusual in my experience that a dermoid of that size should remain without developing further for 14 years. It is not marvelous that it should refill so quickly after being tapped.

Dr. Gustav Zinke—When did you remove the gauze?

Dr. Reamy—After 24 hours.

Dr. Zinke—Did you find any adhesion?

Dr. Reamy—Only to the sheath of the gauze. My object in removing the gauze so early was to avoid the danger of a hernia developing at the lower end of the wound. After pulling at the gauze for a long time, per-

haps 20 or 25 minutes, I began to twist it and then it came away very easily.

Specimen No. 2.—I present this specimen also for a special reason. The specimen I just exhibited is very natural in appearance, because it has been preserved in a 2 per cent. solution of formaldehyde in water. I have tried formaldehyde a number of times, and am certain you will never use alcohol after you have tried this agent. The specimen I now present to you was preserved in alcohol, and is shrunken about one-half. It is a multiple fibroma. This was one tumor and was lying under the bladder; the bladder was pushed up above it, and the woman has experienced a great deal of vesical tenesmus for several years. I saw her four years ago, and was going to operate upon her at that time, but she ran away from me. The patient suffered intense pain, so much so that she had acquired the opium habit to a certain extent.

Dr. Edwin Ricketts—Approximately, what would the tumor have weighed when you removed it?

Dr. Reamy—It was about as large as my two fists. I simply present it to state to you with what facility I removed it per vaginam. I think I could not have delivered this tumor, without probably dividing the uterus, without stretching the vagina and cutting the perineum. The patient had a very narrow and long vagina, and, although a married woman, she had never borne children. The patient was quite fleshy and robust. This tumor presented in front, pushed the bladder up and caused tenesmus. I could feel the tumor through the bladder when the bladder was empty. I divided the neck, as is usual, and opened it posteriorly and anteriorly, and divided this tumor with my scissors before I removed anything else, and then I removed one-half of it. I also would like to call attention to the fact, in addition to the statement as to the facility in removing the tumor, that this patient had been in the habit of taking opium whenever she suffered pain. I used clamps and the patient complained of intense pain about eight or ten hours after the clamps were applied, and I gave her a full dose of morphia, one-quarter grain, repeating it in an hour, and the patient got a splendid sleep. I did not have to again use morphia until about five or six days after I removed the clamps, when the patient had severe pain and some temperature, and I again gave her one-quarter grain of morphia. I had no trouble with the bowels.

Specimen No. 3.—This ovary (I lost the other one) presents nothing peculiar. It is one of a pair of ovaries I removed from a patient from Lima eight days ago, who was in the habit of taking very large doses of opium—one-half grain. The patient was the mother of two children, and she had had for the last two or three years frightful dysmenorrhea, and has had repeated and typical attacks of hystero-epilepsy. The suffering and pain experienced by the patient had become so great that she required opium. After full consultation with her physician, Dr. Terwilliger, I decided the best thing to do was to remove the ovaries. I dilated the cervix, curetted the uterus thoroughly and packed with iodoform gauze. Then I removed the ovaries, continuing to give her the same dose of morphia that she had been taking. It is now eight days after the operation, and she goes without the morphine. Yesterday she took no morphine at all. Of course, it is not anything new or novel that a patient in the habit of taking morphia should continue to do so after an abdominal section, but it is peculiar that two of us should have the same experience regarding the effect of this drug on the action of the bowels. In this case it did not affect the action of the bowels at all.

Specimen No. 4.—This was also a case of dysmenorrhea, lasting for a good many years. The patient was a woman, 25 years of age. It was a typical case of hystero-epilepsy. This woman was once, I think, in an institution of the State several years ago, but has had no trouble of that kind for a long time. For a great while the patient has clamored for the removal of her ovaries, but none of her friends would consent until

now. She had menorrhagia. She would menstruate eight or ten days at a time, and would almost have convulsions at the time. I found the cervix developed not quite in correspondence with the corpus. Yet the want of symmetrical development of the cervix was not sufficient to classify it as a typical case of infantile uterus. The patient commenced to menstruate at 13 years of age and continued to menstruate two years without pain. Those cases in which one part of the uterus is developed more than another are usually prenatal in origin. One ovary was more than double its proper size. This patient also had been in the habit of taking opium occasionally, but she was not an "opium eater." I found that the patient had intense headache on the second day after the operation. Her face became greatly flushed and her headache was perfectly terriffic, and the pulse became a little irritable, so I was somewhat alarmed as to the symptoms. I gave the patient 40 grains of the iodide of potassium, and four or five hours afterward the symptoms had subsided. The patient took the second dose of iodide of potassium, but she did not take morphine.

In the case of the patient from Lima, when I gave her the first dose of morphine the pulse was irregular, about 120, but the temperature was not up, and half an hour after the dose of morphia was taken the pulse was down to 80.

I may say that I have adopted a little different method of dealing with the bowels. On the day of operation, before the operation is done, I am in the habit of giving the patient calomel, six to ten grains, and the next morning I give them a glass of Apenta water, and I seldom have to repeat it. If the operation is done in the afternoon, for instance, I give the calomel on the tongue about 9 o'clock of the same day.

PRESENTATION OF SPECIMEN.

Dr. L. S. Coulter—I will not take much of your time in presenting this specimen. You will notice a marked deformity, both at the upper and lower extremities, clubbed feet and clubbed hands, and the limbs, the right arm and the right leg, show fracture which must have occurred intra-uterine, because there was no instrumental interference on my part, and I noticed these fractures immediately after delivery. The child was born breech first, and there was a little difficulty in delivering the head, but not as much as we often encounter. There was a condition of hydramnios, and I never before attended a woman in which the amount of liquor amnii was as great as in this case. Before delivering the abdomen was prominent, large and a globular shape. Upon examination it was almost impossible to make out the fetal parts. Before the membranes were ruptured I could not detect anything like the head or breech of the child. After the membranes had ruptured the breech presented and the child was soon delivered.

PRESENTATION OF SPECIMEN.

Dr. Magnus A. Tate—I want to present a small specimen of the urine of a patient I delivered recently. The patient was a light mulatto, about 22 years of age, with a syphilitic taint. Yesterday she scrubbed the floor and had been working regularly every day up to that time. This morning about 7 o'clock she began to complain of a terriffic headache, and about 8 o'clock she became unconscious. I saw her about 10 o'clock, and I immediately inserted the catheter and drew off about a teaspoonful and a half of urine, which was very dark, mostly blood. The patient was about eight months pregnant. About half-past 10 or 11 o'clock she went into a comatose condition. The diagnosis was uremia, and I have brought this specimen of urine after having boiled it. The main feature is the amount of blood which it contains and how soluble it is. The history of the case I hope to present later on. I never before saw a case in which the urine presented this appearance, and, of course, another very interesting feature in this case is the short duration. I asked my friend, Dr. Rachford, to come to the hospital and draw off some of the blood so he could make a microscopical examina-

tion, and in the future I hope not only to present the full history of the case, but also to present his report. He said he had never seen such urine taken from a patient. As you will see, this specimen presents the appearance of meat.

PRESENTATION OF SPECIMENS.

Dr. J. Ambrose Johnston—I have here an ovarian tumor. The patient from whom it was removed had been suffering about six or eight months. She went to a dance and danced four or five hours, and after coming home suffered very considerably. I saw the case a week or two after the dance and I found the abdomen distended with ascitic fluid. I removed this tumor, whose pedicle presented a quarter turn. It had begun to degenerate, and caused perhaps three gallons of fluid to collect in the abdomen.

Specimen No. 2.—Here is a fibroid tumor from the cervix uteri. This tumor was attached by a small pedicle near the os. The tumor was entirely extruded from the uterus. The cervix was drawn around the small pedicle, which I snipped off with a pair of scissors. As you will observe, the pedicle is only about one-fourth of an inch long, and yet the tumor was completely extruded from the uterus.

CASE REPORT.

Dr. E. Gustav Zinke—About a month ago a lady upon whom I performed an ovariotomy three years ago was brought to me from Indiana by Dr. Peterson. The patient is about 46 years of age, and in appearance perfectly healthy, but her stature had changed, so that when standing or walking she presented a picture a good deal like that of a subject in the first stage of hip-joint disease. About a year before I saw the patient she had fallen upon the pavement, striking upon the left gluteal region. She got up and after a few days the soreness subsided. The patient noticed no inconvenience from the injury until three or four months later, when she began to complain of what appeared to be sciatica. From the letters I received at the time from the doctor I could only confirm the diagnosis. I did not see the patient at that time. No matter, however, what was done for the sciatica, the pain continued, and by and by pretty large doses of opium or morphia had to be administered to give the patient relief. Her general health did not suffer, but she could not move without causing great pain; in fact, she was brought here on a cot. On digital examination I could find nothing. On inspection I could only detect the deformity we are accustomed to see in morbus coxaris. But when I had the patient stand up I found the right buttock considerably lower than the left, and there was a distinct fluctuation to be ascertained by palpation. The left gluteal region also appeared somewhat swollen. The right gluteal region was about two inches lower than the left, and the gluteal fold had been completely obliterated. I then put the patient in the lithotomy posture, when, to my surprise, I found the swelling had all disappeared. Even under the influence of chloroform neither Dr. Evans, who was at the hospital at the time, nor myself could detect anything. The next day I again examined the patient upon her feet, and found the same condition as before. Whenever she got into the upright posture there appeared to be fluid present, but when she resumed the recumbent posture it disappeared. I kept the patient in bed about two weeks, and the pain subsided, so there was no necessity of administering any drug for the relief of pain. She then became anxious to go home; but before she went I had Professor Conner examine the case. He made a very careful examination. He examined her also through the rectum, which had been emptied for the purpose, and suddenly his attention appeared to be attracted by something. After a careful examination he asked me to examine the same region. Here we found a small tumor about the size of an ordinary pear, with a pedicle springing from the right sacro-iliac synchondrosis, and extending over the right sacro-sciatic foramen. It was apparently a hard, firm tumor, solidly fixed in that region. Then I asked Professor Conner how he would explain the sense

of fluctuation and the disappearance of fluid when the patient was in the upright posture. I had before expressed the opinion that possibly it was a hernia through the sacro-sciatic foramen. We finally concluded to operate. Knowing the dangers of the region in which the tumor appeared to be, and the large blood-vessels and nerves surrounding it, I was not anxious to operate, and was very glad when Dr. Conner offered to do the work. Before he proceeded to operate he thrust his finger again into the rectum, and I noticed the same change come over his countenance that I observed when he examined the patient for the first time. I asked him if he found anything else, and he said no, but he could not find what he found the first time. The tumor had entirely disappeared. Of course, the operation was not made. In the course of two weeks thereafter the patient left for home, and she is still comfortable, but the same condition exists. I thought that probably by presenting this obscure case some of you might be able to shed some light upon it.

What is your diagnosis?

Dr. Zinke—I thought it might be a condition resulting from an operation, in which possibly an opening was made in the broad ligament and covered by the peritoneum proper, and that a hernia formed, and the fluid we feel is merely peritoneal fluid, and the tumor was nothing but a mass of feces kept there in the loop of bowel that had found its way into the hernia when we made the examination. There evidently is no pus present, although Dr. Peterson, when making an examination with a bivalve vaginal speculum, said he gathered about a tablespoonful of pus, and at that time it was thought possible there was some opening there. But there was no discharge of pus from the vagina while the patient was under my observance, and an examination of the vagina failed to reveal any opening.

Dr. A. W. Johnstone—Does the appearance of the fluid, or whatever it may be, in the gluteal region always give pain?

Dr. Zinke—No.

Dr. Johnstone—What is the muscular reaction?

Dr. Zinke—It is good. When the patient is upon her feet this all becomes exceedingly cyanotic, blue in appearance, which I believe is due to the impediment of the circulation by the fluid. She has fluid there now, but you cannot find any fluid when she is in the recumbent posture.

Dr. Reamy—Is the mass most in front or behind the uterus?

Dr. Zinke—It is behind the uterus. The mass seems to fill the posterior cul-de-sac, the right entirely and the left partly.

Dr. Reamy—You could make a diagnosis by simply cutting in behind the uterus and carrying your fingers in and finding what it is.

Dr. Zinke—How about an abdominal section?

Dr. Reamy—Oh, don't do that; that is more dangerous.

Dr. Zinke—But if you should do an abdominal section you could relieve whatever you might find.

Dr. Reamy—But you could do as I said for the purpose of diagnosis without practically any danger.

Dr. Zinke—I aspirated, but could not withdraw any fluid except blood.

DISCUSSION.

Dr. Johnstone—The case Dr. Zinke has reported is to me by all odds the most interesting I have heard for a long time. There are several things that are possible. I have been sitting here thinking of an exploratory incision I made at one time. A woman was apparently dying, and I thought there was a cancer in the position he has described. The patient was progressively running down, and as a last resort I made an exploratory incision, when I came across the queerest condition I ever found in the abdomen. The head of the cecum was down in the pelvis and filled solid with feces. The mass was clear below the ileo-cecal valve, so there was absolutely no current to wash the feces out, and there they stayed. But this was not what caused the trouble, for in that case there was a sarcoma, which I could not diagnosticate from the outside. The last thing Dr. Zinke says about the case

—that is, the introduction of the aspirator without getting anything —shows it must be a venous congestion, probably due to something on the inside, causing interference with the return of the venous circulation. I know it is possible for the cecum to be very much dislocated. In the case I have mentioned there was a hard ball of feces, which seemed like bone upon examination through the vagina and rectum. That patient was bed-ridden when I first saw her, due to the pressure on the solar plexus. Whether or not it is the head of the cecum in the case reported I do not know; it might be a chondroma.

Dr. Zinke—If you were to put a knife between a drawer and the table and try it you would get the same springy sensation that was to be observed in this case.

Dr. Johnstone—Were I to make an incision there I would make it near the umbilicus. You must remember the sacro-sciatic notch is nearer the umbilicus than is the field where we ordinarily work. It is like the old operation that Tait used to make for the removal of tumors of the ovaries.

Of course, we have to give opium to cases such as have been described, but I never quit with them until I get them to stop it. I had the saddest case two years ago. One of the brightest and smartest women I ever saw, the wife of a physician, who married her knowing she was an opium-eater, came to me with infantile uterus and cystic ovaries. They insisted on me operating while the patient continued taking opium. I refused to do so, because I knew of several cases that had been pulled through operations without stopping the habit, and several of them had been broken of the opium habit and recovered from both. The husband took the patient away after bringing her two or three times. Each time she had thought she could fool me, but she found she could not, and at last she went back home. The last thing I told the husband was to not let the patient be touched with a knife until the opium habit was thoroughly broken up, or the opium habit would continue all her life. It was not six months until an operation was done, and there she stayed for a year or two, and she finally died from the complications of opium-eating. That may be a unique experience, but I have never seen a patient operated upon, without breaking the opium habit first, who ever got over the opium habit afterward. So I would never operate upon one of these patients before they stopped the use of opium, unless it was absolutely necessary to do so in order to save life. Every pain they have ever had, every backache that has ever existed, every headache, is not modified in the least and they go on using opium just the same as ever. But where it is a case of life or death, of course it would be perfectly justifiable to operate while the patient was keeping up the use of opium. I have a case now in which the patient is taking morphine regularly. It was a case of carcinoma in which I found the internal iliacs were involved and there was such a condition present I could not make a complete operation. I found a number of little warty growths. In that case there was no difficulty whatever in getting the patient's bowels moved, because in these cases, as a rule, when you begin to break off the opium the bowels become loose. What I dread is giving morphine to patients not accustomed to it.

Dr. Giles S. Mitchell—Dr. Johnstone's experience is absolutely at variance with my own. During the past 15 years I have treated many cases of opium habit, but with unsatisfactory results; indeed, the only case I have ever succeeded in curing was a lady patient who contracted the habit by taking morphine to relieve the pains of dysmenorrhea. She had been using morphine for five years. Daily average, one and a half grains simultaneously. Both ovaries were removed, and when the patient was able to leave the hospital she was cured of both dysmenorrhea and morphia habit. My recollection is that the aggregate of morphine taken after the operation would not amount to more than eight grains. I readily appreciate, as Dr. Johnstone has said, that after the morphine habit is formed it is

next to impossible to differentiate between the pain incident to the withdrawal of the narcotic and the original suffering. But it impresses me that the most rational procedure is first to remove the cause of the vaginal pain and then withdraw the morphine.

As to the case reported by Dr. Zinke, a diagnosis is impossible without an exploratory incision.

Dr. Charles L. Bonifield—In discussing the question of continuing opium in operative cases I simply want to report the case of a woman who had been accustomed to taking morphine for 40 years. After the operation, of course, we continued to give her opium, at first in the form she had taken it and afterward we gave usually gr. jss of morphia at a dose. We succeeded in diminishing the quantity quite materially by the time the patient left.

In the last year it has been the custom of myself—and I think of Dr. Withrow—in almost all cases which we had to pack with gauze to make the opening in the vagina and bring the gauze out that way. Gauze is not as good a drain as it is sometimes supposed to be, and if we can assist it by gravity it is a very great advantage. It has always been my custom to commence removing the gauze in about 24 hours. I simply lay the gauze in in regular folds, so that the end that comes out will not be tangled with any other part of the gauze. In this way I have never had any particular trouble in removing it.

Dr. Zinke—Dr. Reamy's case certainly brought up some very interesting points, not only with reference to cure of the morphine habit, but especially with reference to the use of gauze as a drainage. I know when gauze was first used for that purpose I always had trouble in removing it, and subsequently I had to leave the gauze in so long it absolutely separated by suppuration. The peritoneal cavity was then, of course, shut off, and I could cure my patients without a hernia. Now I use a drainage tube in the centre of the gauze, so the drainage tube is entirely shut off from the peritoneal cavity. Before I remove the drainage tube I remove the gauze, because the gauze is full of fluid, and by twisting it you render it dry and leave the very fluid in the cavity that you want to get out.

In reference to Dr. Johnstone's remarks as to the morphine habit, he either has not made himself understood to me or he and I differ radically in our views. These patients certainly cannot be so successfully cured of the opium or morphine habit before as after we remove the cause of the pain. I think in the case he refers to the case was not operated upon soon enough, and by the time she was operated upon the habit had become so established it could not be broken up. And even if the morphine habit had been broken up what assurance have we that she would not have landed in the insane asylum?

Dr. Johnstone—That patient was not insane, but went there to have the habit broken up.

Dr. Robert Stewart—There is only one thing I would like to call attention to, and that is the case of Dr. Colter's, which I think is of extreme interest from an obstetrical point of view. It looks to me like a case of infantile syphilis. It would be probably called a case of infantile or fetal rickets; probably it would be better classified as a case of infantile syphilis.

Dr. Colter—I could not get from either of the parents any history of syphilis.

Dr. Stewart—The head is very large and the bones are soft and broken, and the fractures would argue for the brittleness of the bones, and the epiphyses are enlarged, which would all speak for syphilis.

Dr. Edwin Ricketts—In regard to the use of opium I reported to this society the case of a lady suffering from ovarian tumor, who had used morphine for quite a time, and who after an ovariotomy was enabled to stop its use and never used it afterward. The case was reported to this society, and was afterward quoted in the British Medical Journal. I think there has not been enough said upon this point as to what we shall do with opium users.

The question is not settled by any means. A case of gall-stones was reported to this society a year ago this month, in which a gentleman had been in bed from August until December, and on the day of operation had to have seven grains of morphia. The operation was done and two stones removed. The physician in charge tells me that gentleman has been able to stop the use of the morphia entirely. On the other hand I have three cases of opium users in which I removed diseased appendages, and all three died. I think I am responsible for the death of those patients because I did not permit them to use opium right along as they had been using it; in fact, I had been deceived by two of them in that I did not know the real amount of morphine they had been using. I do not think Dr. Johnstone has given us sufficient reasons for speaking as he has this evening. I believe a greater percentage of these patients will do better if the operation is done while they are using the opium and the habit is broken up after the operation.

Dr. Rufus B. Hall—I do not care to discuss anything but the opium question. I am glad to hear the differences in opinion in reference to the use of opium and the effect of continuing and discontinuing it at the time of operation. I, like the rest of you, have given this subject especial attention, and am about convinced of the fact that patients who have used opium for a long time—over four, five or six years—and are accustomed to taking opium or morphine but once or twice a day, and especially where they have the usual one dose a day, it makes very little difference to them whether you stop the opium after the operation or before the operation; in fact, the opium seems to have no effect on the movement of the bowels afterward, which is what we most dread. But the acute cases, which must have several doses a day, I am always afraid to put through an operation; I am afraid of the immediate result, that they will die following the operation because you cannot get the bowels to move. And if you keep the opium from them they do not do well afterward. In other words, if I have a case that is acute and is taking from three to five or eight grains a day, and has only been taking it a year or less, if I can reduce the quantity to a quarter of a grain a day for a few weeks I do not feel so afraid of losing the case at the time of the operation. My views are well expressed by Dr. Giles Mitchell with reference to breaking these patients of the habit afterward. I have had two or three cases that I can recall now in which the patients tried hard to stop the opium habit before the operation and could not do it on account of the pain,but after the operation the habit was readily broken up without any difficulty. One patient I can recall now, the only daughter of a prominent family, a married woman 30 odd years of age, who had used opium five or six years. She had a small dermoid, not larger than a small orange, which apparently had existed all this time. The patient was taking several grains of morphine every day. She had been at institutions for a long time to get the habit broken, but in this was not successful. She took less than eight grains of morphine after the operation, now five or six years ago, and she has taken none since. Of course she has had the encouragement of her friends to help her discontinue the use of the drug. I cannot see how it could be possible in such a case to stop the morphine entirely while the patient was suffering the pain that demanded its use; but I believe in an acute case if we can reduce the quantity of morphine before the operation the chance of the patient for recovery is better, and I cannot understand why we could not break them of the habit after the operation as well if not better than before the operation.

Dr. Reamy—Before I forget it I wish to say to the gentlemen who referred to the gauze for drainage that they have a misconception of the reason for which this gauze was used. It was not used for drainage at all, it was used simply as a hemostatic to stop the oozing. The amount of blood which would be in the gauze would do no harm, and I took it out early because I knew it

would come out easier then than later.

As to Dr. Zinke's case, if he were to make an exploration and do nothing, except perhaps break up some adhesions, he could stitch it up and the woman in a few days would hardly know anything had been done. It is the easiest and safest operation imaginable.

Dr. Giles Mitchell—Do you mean to say you can sterilize the vagina thoroughly?

Dr. Reamy—Well, I do not know. If the doctor should find a growth he could remove it through the vagina as well as any other way, and if so desired he could leave the wound open for drainage.

As to operating upon patients who were in the habit of taking opium, in the course of the last ten years I have talked upon this subject more than upon any other subject. If my experience accorded with the experience Dr. Johnstone relates in the instances to which he has referred I would certainly take the same ground as he does; but his experience is so absolutely contradictory to my experience and the experience of those with whom I have conversed that I cannot be governed by his experience. I cannot stop now to go into cases, but those patients who continue the use of opium or morphine during the operation stand the operation better than those who do not, coeteris paribus.

In the last case I reported, as the doctors who are present will testify, the ovary was adherent and the intestines were adherent; the woman had had a peritonitis, and undoubtedly that accounted for the pain the patient had suffered. The case came under the head of Dr. Johnstone's inflammatory dysmenorrhea. I operated upon the woman for the relief of the conditions for which she was first induced to take the opium. She had no twisted pedicle, her life was not imperilled, she was not in worse condition then than she had been for two or three years, but the patient had such pain she could not stop the use of opium, so I continued to give her the opium. And then we took advantage of the removal of the pathological conditions, which were the primary cause of the pain, and secondarily we took advantage of the woman's changed physiological condition and the fact she knew the operation was done for her cure and her knowledge that the cause was removed. We were thus able to get her to stop the opium habit. If you can get a patient to understand the situation and get her moral consent this is the time most favorable of all. Instead of the woman going on to ruin it is one of the highest prerogatives of good surgery and a glorious result that we may rescue these women from their formidable habit. And so I hope Dr. Johnstone's statement will not be heeded.

Dr. Johnstone—What proportion do you cure?

Dr. Reamy—I do not remember, but I can recall two cases that I have operated upon who had the opium habit and were broken of it after the operation.

Dr. Johnstone—Both those cases were operated upon when I was with you, and they were still taking opium when I last heard from them.

Dr. Reamy—Well, I do not know about that, but I can give you the name of one patient who has stopped the habit. I do not know how many cases I have seen, but the number is so large it causes an impression upon my mind to such an extent that it guides my practice. After operation is just the time to cure these patients, although the operation we know, of course, will not cure them of itself. There are two young ladies now down near Lexington, both of whom had hystero-epilepsy, and I saw them both in Lexington about a month ago. Both are perfect pictures of health and do not now take any opium.

The case of Dr. Zinke's, I would think, had malignant disease, if the fluid continues.

Dr. Zinke—She is otherwise in perfect health.

Dr. Reamy—Well, then, it might be an ovary or almost anything else. But the cecum is the most firmly bound down of any part of the gut, and I have seen only one case in which it protruded.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

SPECIALISM AND THE GENERAL PRACTITIONER.

Notwithstanding the rapid growth of specialism there remains a place, and ever will, for the general practitioner, the all-around man, who studies carefully the complete organism and carefully treats it and its component parts. The eye, the ear, the skin, the womb are all in his domain, and should be treated by him for their ordinary diseases. He should know enough to treat such cases properly and to recognize the cases that require the skill of the specialist. The specialist chosen had better be one well grounded in ordinary practice, and not the one-sided man who knows nothing outside of his specialty.

From appearances it would appear that specialism is becoming epidemic. Some believe that the general practitioner will become rarer every year, and finally extinct. But the law—the survival of the fittest—will find expression here, and the new specialist, the young man who has entered upon his life work with but a scanty preparation and with an eye for the main chance, easy hours and profit, can hardly cope with his brother specialist who has worked up from the ranks after a severe course of general practice, which has enriched him with a wide experience, not alone of diseases in general, with their effects on special organs, but of human nature, in which school no one has precedence over the family doctor.

The point we would insist upon is this—specialists should be recruited from the ranks of general practitioners. Then specialism cannot prove mad.

The remarks made by Beverly Robinson at the last meeting of the Association of American Physicians (reported in Boston Med. and Surg. Journal just to hand) show the desirability of our contention. He

said: "The specialist should remember not to treat the nose and throat alone, but to look after the general condition of the patient. The great contrast between the general practitioner and the specialist in the treatment of diseases of the upper air tract was that one looked too much after the general health and neglected local treatment, while the other paid too much attention to the local causes and forgot about the rest of the body."

We will add, the specialist who is well grounded in general practice is the ideal specialist, an ideal that has been and can be realized.

SURGERY FOR TYPHOID PERFORATIONS.

The advance of abdominal surgery is well shown by a paper in the Medical and Surgical Reporter, of Philadelphia, November 7, 1896, in which Dr. Joseph Price relates three cases of recovery following the closure of perforation of the bowels through typhoid ulcers. Of the third case he writes: "I never atempted to close a filthier peritoneal cavity than this, either ante mortem or post mortem."

Dr. Joseph Price urges that every case of perforation should be operated on, for surgery offers the only chance of recovery, although the mortality from such operations must always be high.

At the meeting of the Royal Medical and Surgical Society on January 26 of this year Dr. Lauder Brunton and Mr. Bowlby related a case in which symptoms of perforation of the intestine developed suddenly about a month after the patient was convalescent from typhoid fever. About 18 hours after the first onset of pain the abdomen was opened, a perforation was found and closed by Lembert sutures, and the parts were thoroughly cleaned. Recovery took place, the patient regaining his normal weight in the course of a few months. It was stated that this was the third recorded case of the kind submitted to operation in this country, and the first successful one.

At the same meeting Dr. Herringham and Mr. Bowlby recorded another case in which the abdomen was opened owing to the occurrence of symptoms of perforation during the convalescence from typhoid fever, but in which no lesion was found. The patient recovered. This case was brought forward to show that in cases of recovery from supposed perforation without operation there may not really have been any perforation at all. This is a most important fact.

A CORRECTION.

We may have been somewhat hasty in our announcement that "Illinois close upon the heels of its bill to regulate the practice of medicine in that State has admitted the Osteopaths into all rights and privilges of full-fledged, educated physicians" in our issue of May 21, but then we did not know Governor Tanner would veto the admittance of the latter class. We are glad we have one State in the Union whose Governor can veto bad bills and give rights to regular physicians not enjoyed by the quack.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

GENERAL ELECTRIFICATION AS A RESTORATIVE TONIC.

The instinctive tendency of a patient seated upon the static platform is to take a deep breath and compose the nervous system to rest. With the deepening of respiration the force of the heart is energized and regulated, the internal and surface circulation is equalized, the general tone of the nervous and muscular systems is increased, combustion is carried forward, and increased appetite and capacity for digestion, exercise and sleep, together with a condition of physical refreshment, ensue upon repeated applications.

VAGINISMUS.

Apply vaginal bi-polar faradic sedation with the secondary induction coil selected to produce the most powerful constriction of the muscular fibres that comfortable tolerance permits. Maintain the full dosage for 15 minutes and reduce to zero very gradually. Repeat daily until relieved and continue three times a week until the condition is entirely removed. Improvement will be demonstrated after a very few treatments.

If the mucous membrane is hot and dry the bi-polar application restores the normal secretion.

OVARIAN NEURALGIAS.

Over these pains of women electric currents exercise a sovereign and beneficent sway. Warm and lubricate the improved bi-polar vaginal electrode and insert it into the cavity so that the positive tip rests upon the site of greatest tenderness. Support it with very gentle pressure during treatment, switch into circuit the 1500 yard No. 36 coil, the rapid vibrator and four or five cells. Increase the current strength through the rheostat from zero to the point of comfortable tolerance, being careful to avoid directing the electrode so that the tip sends the current through the muscles of the thigh.

As sedation takes effect and the current becomes less perceptible again slightly increase the dosage. Maintain it at this point for about 15 minutes and very gradually reduce to zero.

Repeat the application daily for a few days and when relief extends to longer intervals lengthen the time between the sittings accordingly. When relief becomes satisfactory and progressive continue the sittings three times a week until complete health is restored.

As the diagnosis of the cause of pain cannot always be made with certainty we may suspect some graver lesion of the ovary if improvement does not progress and is not retarded by the patient's indiscretion or by known complications.

In any event vaginal bi-polar faradic sedation is the first remedy to employ for the relief of pain and the improvement of local nutrition. Treatment three times a week between menstrual periods will in a short time give relief to any uncomplicated case. If the ovary is hyperemic and drags heavily upon its supports the same method will give tone to the tissues, disperse the congested engorgement and, with the aid of a

carbolic and glycerin tampon after the withdrawal of the electrode, the patient will rapidly secure permanent comfort.

If some occasional pain returns after a reasonable number of bi-polar treatments place a felt-covered flat electrode, 6 by 9, over the lower abdomen on the side affected and connect it to the negative pole of the galvanic switchboard. Connect a cotton wrapped carbon ball electrode with the positive pole. Moisten it in a one or two per cent. hot water solution of bicarbonate of soda and insert it in the vagina in contact with the sensitive ovary. Gradually increase the constant galvanic current from zero up to about 20 mil. Maintain this dosage for ten minutes and reduce to zero. Repeat three times a week.

By the use of one or both of these methods many of the painful ovarian disturbances may be treated with perfect confidence in the result. Unless a grave lesion is present to prevent its curative action there is nothing more practical and satisfactory in the whole range of medical gynecology than the action of high efficiency electrical currents in the treatment of neuroses and functional disturbances of the pelvic organs.

ORTHOPEDICS

In charge of DR. E. A. TRACY.

ORTHOPEDICS FOR THE GENERAL PRACTITIONER.

CHAPTER I.

BY EDWARD A. TRACY, M. D., BOSTON.
Fellow of the Massachusetts Medical Society.

Upon the general practitioner, who sees the various diseases of the different organs in their very incipiency, rests considerable responsibility. For the most part, at this stage of such troubles, recognition of the trouble and rightly applied efforts are sufficient for the cure. Such efforts, for several orthopedic diseases, are easily within the reach of the general practitioner and can well be made use of by him.

The family doctor ought to know enough to diagnose tubercular knee-joint disease, hip disease and Pott's disease of the spine. Their recognition in their very incipiency is most important. The treatment of these diseases in this stage is simple enough, the essentials of it all being rest, as nearly absolute as possible, for the diseased parts and the highest attainable degree of health for the rest of the body. To the orthopedists is due all honor for the successful mastery (in great part) of these diseases, which have heretofore done so much damage to the race. However, there is a tendency to confuse by complicated apparatus the principles that govern the treatment of these cases. This tendency it will be our aim to dissipate. The correct principles of treatment will be insisted upon, the simplest method of applying these principles pointed out.

In this paper we shall treat briefly of the diagnosis of incipient hip-joint disease. This disease is apparently very acute in its onset, a lump suddenly manifesting itself, followed quickly by pain, frequently referred by the little sufferer to the knee. The writer has treated a case where the pain was referred to the lower lumbar region. The child quickly takes to bed, and great sensitiveness of the hip joint supervenes. The thigh is flexed, the foot everted and the limb thrown outward. The constancy with which pain is referred to the knee should not throw us off our guard and lead us into the mistake of thinking the knee to be the seat of the disease. An examination of the knee shows it to be normal, like its fellow, with no extra amount of fluid in the joint, no roughening of the membrane, no enlargement, no tenderness on pressure, no thickening of the synovial membrane, and nothing abnormal in the contour of the joint. (The knee should always be examined and watched, as the writer has treated tubercular knee-joint disease with hip disease on the same side in the same patient.)

The hip joint is generally found tender on deep pressure over the trachanter. "Night cries" are often present, due to muscular spasms, pulling sensitive joint surfaces together. Muscular rigidity is the chief diagnostic mark of hip-joint disease; because of this rigidity the normal motions of the hip joint are limited. This limitation of motion is due to tonic muscular contraction of the muscles acting upon the joint. This stiffness, to a more or less degree, is always present in hip-joint disease, and should be carefully sought for. Not that its detection is at all difficult in most cases, but sometimes in very young children, when the limitation of motion is but slight, it requires patience and tact to discover it. The movements of both hip joints should be compared carefully. In testing the amount of flexion of the suspected limb it is well to distinguish between actual flexion and apparent flexion. Sometimes the diseased limb can be apparently flexed as much as the sound one, but if we take hold of the ilium we shall find that it is stationary during the motion of the sound limb, while on extreme flexion of the diseased limb it moves backward with the thigh, allowing the knee to approach as near the abdomen as the other one, though the actual flexion of the thigh is less. This is an important point. Limitation of extension can be discovered by pressing on the knee till the under surface of it touches the flat surface upon which the patient lies, when, if there is limitation present the back will be found arched up somewhat. Limitation of abduction or adduction can be noted by holding the pelvis and comparing the motions of the normal and the suspected limb, the pelvis moving with the limb when the limit of the joint's motion in these directions has been reached.

After a time atrophy of the thigh and leg muscles is noticeable, and the fold of the buttock over the diseased hip becomes obliterated. Of great importance is the gait, a limp, sometimes being more marked than at other times, being always present in hip disease. Lameness in a child should be carefully noted and its causes investigated..

The temperature has been found a degree or two above normal in several incipient cases treated by the writer. The most important point in the diagnosis of incipient hip-joint disease are:

1. Limitation of the normal joint motions.
2. Limp.
3. Leanness of the thigh and calf due to muscular atrophy.
4. Pain generally referred to the knee.
5. Tenderness on deep pressure over the great trochanter, or deep in over the head of the femur.
6. Temperature above normal.

The writer has seen several cases of sudden onset when several of these signs were present, and which naturally caused for the time apprehension of severe joint trouble. Nevertheless the symptoms disappeared in from two days to one month.

This shows that the diagnosis must not be made too soon. Watch

the case, treat it properly and reserve your diagnosis until the signs that distinguish the trouble are such that doubt need no longer be entertained. About the proper treatment we shall treat of in our next.

THE TREATMENT OF TUBERCULOUS DISEASE OF THE HIP IN ITS EARLY STAGES.

BY HOWARD MARSH, F. R. C. S.
Surgeon to St. Bartholomew's Hospital.
(Abstract from British Medical Journal, May 8, 1897.)

In the British Medical Journal of April 24 is a paper by Mr. Tobin on "Osteotomy of the Femur as a Treatment for Tuberculous Hip Disease in its Early Stages." In the following remarks it will be my endeavor to show that the difficulties which have presented themselves to Mr. Tobin, and to meet which he has resorted to a proceeding the advisability of which I believe many will be inclined to question, have received the attention of surgeons both in England and in America, and have been overcome by methods that can readily be applied.

Large effusion in early tuberculous disease of those joints which are superficial enough to allow an investigation of this point—the hip, the knee and the ankle—is seldom present, and I am not aware of any evidence to prove that the hip differs from the other joints in this respect. The probability seems to be that the hip, like the other joints, is placed in the position of greatest ease, not because it is distended with fluid, but in order that the swollen and sensitive, soft structures may as far as possible be placed in a state of relaxation—one of the principal elements of physiological rest. The familiar experiment of Mr. Swann, which Mr. Tobin quotes, no doubt shows that the capsule can accommodate the greatest quantity of fluid when the limb is flexed, abducted and everted. But that the limb assumes this position in early disease is no evidence that the joint is distended. All joints, including the hip, tend, when they are inflamed—whether they contain fluid or whether they do not—to assume their respective positions of greatest ease.

Speaking of the use of weight extension, Mr. Tobin says that this method "does not act in the way it is represented as doing in the plates in handbooks of surgery. In these," he continues, "you see a patient with a weight attached to the limb lying supine, with his back and knee flat and both touching the mattress. What really happens is this—if the weight is heavy enough to keep the leg straight the spine is dragged into a position of lordosis; if it is less heavy there is less straightening of the limb and less lordosis, in which case the lordosis is an indication of force exerted on the joint to its discomfort." I do not know to what plates in any handbooks Mr. Tobin would have fully justified its introduction, is passed over without notice, so that the mistake which Mr. Tobin has in view is not made. It is 21 years ago since in the Huterian Lectures, delivered at the College of Surgeons, I pointed out that when weight extension is applied while the limb is in the position which Mr. Tobin so justly criticises the force employed acts, not as extension, but as leverage, for the femur is used as a lever, the weight suspended from the foot acts as the power and the acetabulum as the fulcrum, so that instead of relieving pressure between the head of the femur and the acetabulum it tends directly to increase it.

In order to obviate this objectionable condition of things, "when the hip is the affected joint the leg must be extended on the thigh, and the whole limb must be raised till the spine is free from lordosis, and then be supported in this position, the weight being made to act in the long axis of the limb. Then, as the weight gradually reduces the angle of flexion at the joint the apparatus must be rearranged by reducing the height to which the limb is raised, and by changing the position of the pulley so that traction is still maintained in the long axis of the limb. By following out this process the limb will gradually be brought down into a position of full extension.

"It is often surprising to see how

quickly this method of weight extension in the line of the thigh will remove deformity. In recent cases it will reduce the limb to its natural position in ten days or a fortnight, while often in cases of longer standing it will do so in the course of a few weeks." It is quite certain that by weight extension thus applied the limb will be brought down into its correct position within the time occupied by the repair of the femur after Mr. Tobin's osteotomy. This speedy correction of deformity is due to the fact that weight extension removes muscular spasm. When spasm is no longer present the limb is free to return to its normal position.

In a very large number of cases in which early hip disease is adequately treated, complete or very wide movement is retained, and the power of complete extension (together with other movements) is restored, and when this is the case will not the patient be placed at a disadvantage by the fact that his femur has been divided, and made to unite in a position of angular deformity?

Clinical Medicine.

In charge of DR. J. J. MORRISSEY.

THE HEART AND THE WHEEL.

J. J. MORRISSEY, A. M., M. D

The bicycle can no longer be considered a "fad;" it has become an instrument of absolute necessity to a large and constantly growing class of patrons. From a medical standpoint, or rather from a physiological standard, it must be regarded as one of the most useful inventions of the age. It has certainly accomplished more in the way of dissipating the melancholy visions of many a brain-weary mortal than all the pleasant concoctions of medical art. To the student or the business man, whose mind is constantly concentrated on some one department, to the professional man, physician or lawyer, continuously harassed by the obligations of his profession, the bicycle comes as a safeguard in which relaxation, change of scene and environment, the vision of radiant beauties on mountain and vale, in lake and river, in whose depths the very glories of the Eternal appear to be mirrored, imbues with new life, new aspirations and a complete metamorphosis in the bodily constitution.

These are a few of the advantages to be derived from its proper use. The functional powers of the system are increased and rendered correspondingly more active, the stomach rejoices in an afflux of blood richly intensified by the presence of an abundance of oxygen, and performs its duties with more zeal and vigor; the liver, the great storehouse of the entire system, is stimulated to renewed action, and the products of the metabolic changes which the body in constantly undergoing, instead of remaining within and proving sources of irritation, are rapidly eliminated. The brain, too, partakes of the renewed activity of the other portions of the system; in fact, there is no class of people so much benefit-

ed by the wheel as those who labor with their heads rather than their hands. Therefore to those of sedentary occupations the use of the wheel is especially beneficial. In this class of people there prevails a condition of chronic cerebral congestion which may be greatly improved and the evil consequences postponed, if not altogether abrogated. The lungs and heart—but here we must issue a note of warning. There is probably no organ of the body to which so much irremediable damage can be done as to the heart in the abuse of the bicycle. In fact it would be well for every person who has ever suffered from acute articular rheumatism to have the heart examined by a competent physician before mounting the bicycle. There are certain forms of cardiac difficulty in which the bicycle, used with the intelligent supervision of a physician, can be made a powerful factor in subduing the disease. The sluggish circulation of the blood in organic heart disease does not supply sufficient oxygen to the system, and hence we have the symptoms, dyspnea, headache, fainting spells, debility and numerous others. And as oxygen is the basis of all tissue building it will be apparent how necessary it is to constantly renew the supply.

Excessive bicycle riding, and especially scorching, is apt to lead to acute dilatation of the left side of the heart, which, however, generally recovers itself when the cause has been removed. But if there is present any changes in the muscular tissue of the heart of a degenerative character the systolic power of the heart is weakened and finally lost, resulting in sudden death. It is a well-known fact that people affected with heart disease, especially with ventricular dilatation, are very susceptible to attacks of pain over the cardiac region when they overtax this organ by ascending mountain elevations, which causes weakened capacity of the heart and great distention. In this connection it may be mentioned that between distention and dilatation there is quite a difference. In distention the cavities are overful, but return to their normal dimensions when the cause is removed. In dilatation the walls have yielded—one may be a simple physiological process, the other of a pathological character depending upon some antecedent cause. All violent exercise causes the distention of the right heart, and at times the distention is so marked that it requires a considerable period of time before the right heart succeeds in transmitting the blood through the lungs as it is brought to it by the veins. This condition is recognized as "being out of breath." How often do we meet with dilatation with its usual symptom, palpitation, in young people with a history of over exertion, as in bicycling, where efforts are made and maintained beyond the rider's physical powers. If, contrary to advice, he persists in continuing this absolutely injurious form of exercise he will soon find that the wheel has lost its charms and that he is no longer able to ride any distance without great difficulty. In the fatty degeneration of long continued heart disease, as well as in the senile heart, the bicycle should be eschewed, or advised in a selected number of cases. In women approaching menopause, where there is often found an access of heart symptoms due to an arterio-sclerosis —de la menopause—and not to the hyperesthetic nervous state of the period, the bicycle could be used with great advantage. This condition of arterial cardiopathy, while it frequently develops insidiously, may show itself suddenly in the form of dyspnea, palpitation and angina, while, if the cerebral vessels are specially attacked, in hemorrhages; if the abdominal viscera, in severe disturbances of those organs, such as congestions, dropsies, uremia and so on.

When the hypertrophied cardiac muscle begins to lose its grasp and grow weak beneath the burden of its great responsibility, judicious use of the wheel may be permitted to a very limited extent, and especially when the hypertrophied condition of the cardiac muscle is associated with the arterial cardiopathy, of which we have spoken above.

These then are a few of the lead-

ing indications concerning the bicycle when used in moderation. It is not its proper use that rightfully is regarded as an excellent hygienic measure, but its abuse is to be condemned.

Current Medical Literature.

ALIMENTATION IN DISEASE.

BY DR. JAMES C. NIDELET,
St. Louis, Mo.

Recognizing the imperative necessity of proper nourishment in conditions of disease, and particularly when the patient is exhausted from long continued fever, I have made it a practice to resort to the use of Somatose in preference to all other food products. After three years' experience with it I must acknowledge it to be the best nutriment offered to the profession for patients of all ages. I cannot recall any instance in which it was rejected, even when the patient was suffering with nausea. This positive fact renders its use the more available. In the aged, when the appetite is irregular and assimilation indifferent, I regard it superior to stimulants, although the latter should not be ignored if required.

From the numerous cases in which I have employed Somatose I have selected the following as evidence of its beneficial influence:

Case 1.—Mrs. C. N., aged 86 years, was suffering from a severe attack of cholera morbus, having had 21 colliquative passages. She was troubled with constant nausea, all liquids being ejected after repeated trials. Somatose was the only food that was retained and well tolerated. She was sustained on it alone for over 48 hours, after which time thin soups and milk were allowed. She recovered and is still living at the advanced age of 87 years and three months.

Case 2.—Miss L. H., aged 22 years, had been ill with a continued fever for eight weeks. The stomach was irritable, with constant nausea and inability to retain food of any kind. She was so emaciated and feeble as to be unable to stand without assistance. Somatose was resorted to and even the first dose retained. She continued its use until convalescent and is now enjoying good health.

Case 3.—P. K., a boy 10 years old, also suffered with continued fever, the temperature ranging from 104 to 105 degrees for nearly two weeks. When first seen he was anemic and emaciated, with loss of appetite. Milk was poorly digested and only partially assimilated. Somatose was administered in teaspoonful doses three or four times daily for a number of weeks. It was always well borne and kept up the patient's strength, so that when the fever subsided he was able to get out of bed and stand without assistance.

In conclusion I must reiterate that Somatose fulfills all expectations in sustaining strength and can be administered with the confidence of being retained where everything else fails. I know of no condition in the course of any disease which contraindicates its use.

GLANDULAR FEVER.

Glandular fever was recently the subject of an interesting discussion before the Philadelphia County Medical Society. Dr. Albert E. Roussel (Medical Bulletin), who reported four cases, concluded that we are in reality dealing with a group of symptoms in the main sufficiently distinct to merit the designation of a disease. These cases occurred all in one family and this would seem to emphasize their infectious or contagious nature. It is also notable that one of Dr. Roussel's patients was an adult, as only two other similar cases have been recorded. The temperature records of his cases were rather below those mentioned by other authors, while the pulse rates were somewhat higher. Except, perhaps, in one instance the glandular swelling was unilateral and observed within the first 36 hours. The surrounding skin was normal and in no instance did suppuration result. There was no involvement of glands in other parts of the body, no enlargement of the spleen and liver, and and no albumen was present in the urine. Dr. Roussel states that the treatment in these cases is necessarily symptomatic. The use of small doses of calomel at the onset has according to different observers been of particular benefit. He has also made use of a small dose of salophen, which seemed to somewhat relieve the pain and general malaise. The administration of iron is indicated during convalescence. In view of the increasing interest shown in glandular fever during recent years it is well to bear in mind Dr. Roussel's suggestions as to the value of salophen in alleviating the general discomfort.

PAIN AND ITS THERAPEUSIS.

Dr. S. V. Clevenger, after pointing out the disadvantages of various analgesic drugs, states that lactophenin is destined to supersede largely the entire array of analgesics proper, owing to its non-toxic peculiarities and the feeling of comfort described by many physicians as following its use. It affords the best results with the least ill effects. Its range of incompatibility is less than other synthetic compounds and it may be combined with caffeine, quinine and salicylic acid. The minimum dose of 5 to 10 grains may be increased until a daily maximum of 45 grains has been reached. It is but slightly soluble in water, although acting promptly, so that it can be given dry and be washed down with a drink of water. A dose of 15 grains usually acts as a feeble hypnotic. There are no untoward symptoms following its use, and, contrary to the experience with some synthetic drugs, the pulse becomes fuller and stronger under its use. The range of application is extensive, and the testimony of the author is in corroboration of the findings of other physicians as to its superior analgesic effects, its safety and promptness of action.

—R. W. Wilcox, M. D., in American Journal of the Medical Sciences, May, 1897, quoting from Journal of the American Medical Association, 1897, No. 5.

FANDANGOES.

There is too much running after fads in our profession; too much striving after the odd and eccentric; too much antitoxin and serum-therapy and microbe hunting, and Chinese toy-shop apparatus and instruments, and not enough of that placid horse sense which just cures folks and lets the book doctors and instrument inventors give the long-handled names.

N. A. Jour. Hom.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

OSTEOPATHY.

The Legislature of North Dakota has just passed a law legalizing osteopathy, and the "bone doctor" can now elbow his hitherto arrogant and misguided brother in the regular profession. The professional mind can reconcile itself to the attacks of temporary imbecility which seize upon the public periodically and run their course. The Schlatter craze is a conspicuous example, but it will find it hard to realize that a sovereign State, possessing a common school system, newspapers and other agencies for diffusing knowledge, could enact laws legalizing and giving a quasi respectability to a fraud like this. We extend our sympathy to the profession of a State so publicly insulted by its lawmakers.

—Journal of Arkansas Med. Society.

OBSERVATIONS ON THE CAUSATION OF TRAUMATIC RUPTURE OF THE URINARY BLADDER.

V. Stubenrauch has investigated the resistance offered by the bladder to distension by filling it with water under pressure, both in the dead body and in recently killed animals. From these experimental observations and a study of the recorded cases of rupture of the bladder he has arrived at the following conclusions: That for the common traumatic rupture of the bladder there must exist a certain amount of distension of the organ, and the violence applied to it must be of a sufficient degree of intensity. The nature of the violence and the sight of its application are of minor importance. The violence need not even be applied to the bladder itself, for rupture has resulted from a fall on the buttocks. In 70 out of 154 recorded cases the seat of rupture was in the upper and posterior wall. This situation of the rupture is not to be explained by the viscus being pushed against the sacral promontory. The wall of the bladder would appear to be less resistant in its upper and posterior part, because of the existence of gaps between the bands of longitudinal muscular fibres, and it is possible that the resistance is greater in other parts of the organ, because these are better supported by the surrounding parts, e. g., belly wall, symphysis pubis, spinal column, loaded rectum. The shape and direction of the common rent does not depend upon the nature of the violence, but upon the arrangement of the muscular fibres of the organ. In the process of rupture the mucous membrane would appear to give way first, then the muscular coat, and lastly the peritoneum. In incomplete ruptures the peritoneum remains intact, but it may give way later as the result of over distension, and the rupture becomes complete. This may not take place for several days after receipt of the violence. Cases are recorded in which this occurrence has given rise to serious mistakes in diagnosis and to differences of opinion in medico-legal practice.

—Centralbl. f. Chir., Leipzig, 1897, No. 8; Arch. f. klin. Chir., Berlin, Bd., li. Heft 2.

BIER'S TREATMENT OF TUBERCULOUS ARTHRITIS.

Boutroue (These de Paris, 8 vo., pp. 38, vii Obs., 1896-97, No. 2) records the success of this method in seven cases in Aubeau's clinic at the Hopital International, Paris. The circulation in the affected limb was almost completely arrested every day

or every other day by the application over a layer of cotton wool of an Esmarch bandage above the affected joint for a period of five or six minutes at first, afterward increased, but never exceeding 20 minutes. In the intervals the limb was kept wrapped in cotton wool in a gutta percha splint, but every day or every other day was placed for 20 or 30 minutes in a bath of boiled water kept at a temperature of 50 degrees to 55 degrees C. (122 degrees to 131 degrees F.) In affection of the knee joint the bath was given by hot compresses—10 to 15 layers of tarletan covered with oil silk. To relieve pruritus an ointment of mercury and belladonna was used and suitable constitutional treatment was adopted. Massage was cautiously applied later, the sine qua non being that it should not give pain. Two cases were completely cured, the others greatly improved. Boutroue does not consider the local asphyxia and bath of serum a sufficient explantion of the effects of venous stasis upon tuberculous arthritis. No doubt the formation of fibrous tissue is thus promoted, but a great part of the benefit is due to a sort of auto-sero-therapy by direct action on the tubercle bacillus.

—The British Medical Journal, May 1, 1897

A remarkable case of extravasation of urine is reported by Richard Barwell (Med. Press and Circular). The man, aet. 36, previously to November was perfectly healthy. One night, after coitus, in which nothing unusual occurred, he went to sleep and on waking next morning found the scrotum much swollen. During the next few days the swelling increased. Five days after he had a subnormal temperature, a rather feeble, quick pulse 108, tongue slightly furred, the constitutional symptoms in regard to the local condition being slight, and he said he felt quite well up to four hours ago, and even now only "a little down." The scrotum was greatly distended, boggy to touch, red and studded with blotches here and there of dark brown discoloration. The penis was but slightly swollen, or reddened and free of sloughy spots, while the perineum, much distended to within a very short distance of the anus, exhibited two sphacelated spots. He asserted that he never had any difficulty in passing urine, which flowed in a full-sized stream. Deep incisions were made in the perineum and scrotum, exposing the superficial muscles of the urethra and the testicles. The sodden tissues were full of urine, with the usual ammoniacal, sloughy odor. One bleeding vessel, being too rotten to bear either torsion or ligature, was secured by leaving it on a pair of forceps; the very soft state of all tissues rendered interference with the urethra inadvisable. Five days after the incisions were made he lost about four ounces of blood by the rupture of a vessel in or close to the right testicle. This depressed his health considerably, but freer stimulation overcame the condition in about eight hours. The rare and interesting features of this case lay in the local condition. Rupture of the urethra, as an immediate result of coitus, had once or twice been reported, but invariably in the penile portion of the tube, never, as far as he was aware, in the membranous part. A No. 12 catheter passed into the bladder without encountering the slightest obstacle, and treatment for the urethra was therefore unnecessary. The man lost by sphacelus about four-fifths of the scrotum, but the parts healed and the whole was quite sound exactly six weeks after, the testicles being enclosed in a new bag, which, though it looked tight, interfered neither with comfort nor function.

SPRAINED ANKLE.

BY T. V. GIFFORD, M. D., M. S.,
Kokomo, Ind.

I read Dr. J. B. Ramsey's request for advice in case of a sprained ankle joint. Would say in reply:

Cleanse the bowels every other day with copious injections of warm water, two to four quarts at once. Wrap the foot and ankle in old soft flannel of four or more thicknesses, half way to the knee.

Immerse the limb in a large vessel of water to above the flannel, water to be at 102 to 104 degrees, as can be borne. Add hot water occasion-

ally to keep the desired temperature.

Continue this treatment for an hour once a day. Late in the evening, before retiring, is a good time. At the end of the hour remove the flannel, wrap the foot and ankle in some cotton cloths, four or more thicknesses, wet in warm water; wrap the whole—foot and cloth—in dry flannel, well bound about and made secure with safety pins. This treatment to continue. The hot application for one hour and the bandage for the rest of the time.

—Medical Brief.

A SUBSTITUTE FOR AMPUTATION.

A new and simple mode of treatment has been introduced in France by which it is claimed a large proportion of limbs now usually amputated can be saved. The method, which is due to Dr. Reclus, was recently described before the French Congress of Surgery, and is thus explained by the Hospital, April 18 (Lit. Dig.): Whatever the extent or gravity of the lesions he (Dr. Reclus) never under any circumstances amputates the injured limb, but merely wraps it in antiseptic substances by a veritable "embalming" process, leaving nature to separate the dead from the living tissues. This method of treatment possesses the double advantage of being much less fatal than surgical exeresis, and of preserving for the use of the patient, if not the entire limb, at any rate a much larger part than would be left after amputation. He advocates this very conservative treatment on account of the excellent effects of hot water, which he uses freely. After the skin has been shaven and cleansed from all fatty substances by ether, etc., in the usual way, a jet of hot water, 60 degrees to 62 degrees C. (140 degrees to 144 degress Fahr.), but not higher, is made to irrigate all the injured surfaces, and to penetrate into all the hollows and under all the detached parts of the wound, without exception. This is the only way of removing all clots and to wash away all foreign bodies, together with the micro-organisms they may contain. The advantages of hot water at this high temperature are threefold: (1) Hot water at this temperature is antiseptic, heat greatly increasing the potency of antiseptic substances; (2) it is hemostatic, (3) it helps to compensate for the loss of heat resulting from the bleeding, and especially from the traumatic shock. After the "embalming" process, and the dead tissue has been separated from the living, the surgeon has nothing to do except to divide the bone at a suitable spot.

—Medical Times.

USES OF COCAIN.

The following practical observations on the surgical use of cocain are quoted by the American Therapist from the Codex Medicus:

1. The use of cocain should not be abandoned because its irrational employment has produced deleterious results.

2. Always make a thorough physical examination of the patient before injecting the drug.

3. It should not be used in cases showing organic diseases of the brain, heart, lungs or kidneys, or in persons of neurotic diathesis.

4. Children bear it fully as well as adults.

5. The patient should always be placed in a recumbent position prior to its employment.

6. Constriction should be used whenever possible to limit the action of the drug to the desired area.

7. Use a freshly prepared solution for each case.

8. Distilled water should always be employed, to which phenic, salicylic or boric acid should be added.

9. A 2 per cent. solution has a better effect and is safer than solutions of greater strength.

10. Never inject a larger quantity than one and one-eighth grains when no constriction is used.

11. About the head, face and neck one-third of a grain should never be exceeded.

12. When constriction is possible the dose may be as large as two grains.

13. Every slight physiologic effect is not necessarily to be taken as cause for alarm.

14. Cocain does have effect upon inflamed tissues.

15. In case alarming symptoms occur use amyl nitrite, strychnin, digitalis, ether or ammonia.

To which we will add: Always use a chemically pure product, free from isatropyl and cinnamyli-cocain as well as other impurities, the presence or absence of which can be readily ascertained by the simple tests of the United States pharmacopeia.

—Medical and Surgical Reporter.

THE SURGEON IN HIS RELATION TO THE PUBLIC.

M. O. TERRY, M. D.,
Utica, N. Y.

Unfortunately for human life, its limitation prevents the surgeon from planting in the minds of the profession as firmly as need be any progressive ideas he may have advanced before his presence is demanded in "worlds unknown." At times the idea has been so brilliantly set forth and the clinical support has been so convincing that the ripple of thought will be converted into a wave which takes the profession by storm. At other times the arrest of the magic pen, with its logical current of thought, suspends the progress set in motion until taken up by another. There may be a wise provision in this method of progress which we are not perfectly familiar with, so we will drop that element of destiny and look at the unfortunate surgeon who dares to move in advance, treading under foot the accepted teachings of the past.

Patients are dying daily from neglect, and patients are dying daily from too much enthusiasm with the knife.

Within my remembrance one of America's most brilliant surgeons has snatched from a physician, made famous by his originality of thought in formulating a law, fully one-third of the supposed value of it by simply giving his mind to nerve distribution. It was soon made obvious to this logical thinker that a pathological condition did not always exist at the seat of pain. That a prescription for a reflex pain was in the main ridiculous. That the source of the pain was the region to relieve by methods either surgical or medical. He has amply proven the truth of his observations by practice, but is yet ridiculed by the majority of the profession, and it will be more than a decade of years after he has been called to other regions before these truths will be fully accepted. The cures made under the new comprehension of facts but show what victims we have made of the public during our onward march from darkness into daylight.

The human body is one vast mystery. With all of our powers of reasoning we cannot comprehend that intelligence which takes charge of our food after it has been placed in the stomach; how the elements needed are abstracted from the emulsion, and those not needed removed; just how we use our brains in almost unconscious locomotion; the nature of the sentinel which presides over respiration, awake or asleep, and so on. It would seem reasonable, in view of our limited comprehension of the processes of life, and it would place us in a less ridiculous light if we should admit at once that the Creator completed his work in the model called man rather than to question his ability in regard to contemplating the anatomical work in question.

—Journal of Orificial Surgery.

HIGHER MEDICAL EDUCATION.

Higher medical education is being continually sung in our ears by little men in the profession who happen to get onto State Boards of Health and wish to appear great by talking "large on this subject, as if medical education had not steadily advanced most marvelously during the last few decades and as if the equipment of the leading medical schools were not constantly adding to their teaching facilities since the day when Benjamin Rush founded the first medical college in this country, patterned after the best schools of Great Britain, and as if medical men in this country who teach in the best chartered colleges were all incompetent.

It is a strange spectacle to see this everlasting notoriety seeking by

medical men "clothed with a little brief authority," assaulting colleges tenfold better than those they graduated in, with facilities twice as great and far better qualified, equipments far more complete and terms of study lengthened to twice the time they spent as students.

The little fellows of some State Boards are the most clamorous for higher medical education, restrictive legislation and discrimination against the diplomas of the best chartered colleges.

The medical profession cannot be trusted to exercise chartered rights, like other instructors, when instructors secure charters to teach, but must be subjected to additional espionage by State medical detectors called examining boards, and last comes a new proposition to examine the professors, as if the faculties of honorable medical men and boards of trustees controlling our medical colleges required this spying system more than the literary and scientific universities of the land. But if the faculties are to be examined by a board of examiners, who will examine the examiners and attest their qualifications?

Now we are opposed to this whole system of discriminating espionage reflecting on the integrity and qualifications of the teaching element of the United States, and it is a shame that it should come only from medical men, too, who are usually of exceedingly slender qualifications themselves and who wish to appear great in their littleness by defaming American medical education, which, considering that it gets no aid from the State or people, and is in no sense a paying business to those engaged in it, is the best in the world and is making more strides to-day in the direction of the very zenith of practical utility than that of any other country. And what country has such institutions of medical teaching as the United States as the sole result of personal professional effort, zeal and financial support without State aid?

Rush and Jefferson, the universities of Pennsylvania, Virginia, Minnesota, Michigan, Bellevue, Barnes, Baltimore, California, Tulane and in nearly every city and State are monuments of indefatigable medical devotion and largely disinterested sacrifice of medical time, talent and means, to advance medical education. Every large city on this continent has schools of which Americans may be justly proud, notwithstanding the notes of defamation and puerile cries of suspicion directed from various unhallowed motives against them.

Defamation of American medical colleges by little mediocrities in medicine has about reached the limit of toleration by the friends of medical education in the profession.

The question how to improve and advance is always in order, but late methods of public defamation of American schools is despicable and disastrous to the welfare of the whole medical profession and should be discountenanced and discontinued.

State Boards and schools should arbitrate differences and not antagonize.

Editorial Alchemist and Neurologist, April, 1897.

NOTES ON VARICOCELE CIRSOCELE; ITS PATHOLOGY, CLINICAL HISTORY AND TREATMENT.*

BY THOMAS H. MANLEY, M. D.,
New York.

CONCLUSIONS.

1. Varicocele or phlebectasia of the spermatic cord is an infirmity of early life; its evolution being contemporaneous with the advent of sexual activity.

2. Pathologically, while the vesicular inertia, dilatation, thinning, sclerosis, or thrombosis, are quite identical with varix in other situations, in this instance an organ intimately associated with vital processes with procreation and individuality is involved, we have severe local symptoms with reflex disturbances made manifest through psychic derangement.

3. Spermatorrhea, azoo-spermia, limited impotence, urethral irritation and vesical incompetence are not unusual concomitant conditions, and in all protracted cases the testicles are consecutively the seat of organic changes.

4. The pathologic mutations which give rise to the most concentrated distress are a localized phlebitis, periphlebitis, tension and pressure on the medullary and sympathetic nerves, which are sometimes as pronounced in the incipient as in voluminous varicocele.

5. As this condition is not uncommonly associated with rupture, present or impending, the relief of this is something of the highest import, even by operative procedures, as a truss only aggravates the condition, if it does not sometimes induce it. Bathing, massage, electrolysis and support should be always thoroughly tried, as curative agents first; then, if pain still persist, ligation, excision or divulsion under cocaine is prompt and effective as a radical cure. In all but unusual cases the patient remains at his usual occupation.

—New England Medical Monthly.

Book Reviews.

BOOK ANNOUNCEMENT.

Mr. Moulton begs to announce as in preparation for early publication, "The Doctor's Window," poems by the doctor, for the doctor and about the doctor, edited by Ina Russelle Warren. The compilation of this collection has required two years and it contains nearly every poem of importance on the subject in the English language, including: Armstrong's "Art of Preserving Health," Garth's "Dispensary," Henley's "In the Hospital," Dr. Holmes' "The Morning Visit and "Rip Van Winkle, M. D.," Riley's "Doc Sifers," Carleton's "The Country Doctor" and "The Doctor's Story," Eugene Field's "Doctor Rabelais" and "His Pneumogastric Nerve," Peck's "Bessie Brown, M. D." Whittier's "To a Young Physician," and about 75 other standard poems. It also includes a number of powerful poems never before published. Nearly every phase of the physician's life is introduced, both grave and gay. The book will go through the press under the direct supervision of the editor and will be printed with large, open-faced type on heavy linen paper, will be royal octavo in size, 7x9 3-4 inches, and illustrated, making a volume of over 240 pages. The bindings will be in library style, uncut, gilt top. Price, in cloth, $2.50; full morocco, $5.00.

For further information and prospectus address the publisher, Charles Wells Moulton, Buffalo, N. Y.

THE OCCASIONAL ADDRESS, ITS LITERATURE AND COMPOSITION.—A study in demonstrative oratory. By Lorenzo Sears, professor in Brown University. G. P. Putnam's Sons, New York, Publishers.

This work presents, from the analytic and synthetic points of view the requirements for the production of the occasional address. The author has had chiefly in view the needs of the student, but gives suggestions which may be found of service not only to those who may be interested in the study and structure of rhetorical composition, but also in the more serious efforts of the preacher, the lawyer, the political speaker and to the very considerable group of unprofessional citizens who are from time to time called upon to make in spoken words an effective presentation of their thoughts.

Prescriptions.

CORYZA.

In coryza the following sprayed into the nose may be useful:

R—Ichthyol .....1 part
Ether .....1 part
Alcohol .....1 part
Distilled water .....97 parts

TREATMENT OF ECZEMA.

At the twenty-third congress of the German Surgical Society, Dr. Rotter recommended the following as an efficient application for the treatment of eczema:

R—Formalin .....1 part
Zinc oxide .....100 parts
Powdered talc .....100 parts
Vaselin .....200 parts

MIGRAINE.

For migraine a tablespoonful three times a day of the following may often be given with advantage:

R—Exalgin .....1 gr.
Rum .....1 fl. oz.
Syrup .....1 fl. oz.
Water .....4 fl. oz.

TINEA FAVOSA.

Dr. Khrenitchek recommends washing the scalp with tincture of green soap and shaving the affected area. Then the following mixture should be applied. If the hair grows rapidly the shaving may be repeated every two or three days.

R—Acidi carbolici .....
Balsami peruviani ..Each 2½ drs.
Petrolei .....
Glycerini ..... Each 3 oz.
M.

—Semaine Medicale.

APPLICATION TO PRODUCE LOCAL ANESTHESIA.

R—Chloroform ..... 10 parts
Ether ..... 15 parts
Menthol .....1 part

The anæsthesia resulting from this application lasts about five minutes.—Le Gerant and E. Pierre.

—Semaine Medicale.

PULMONARY TUBERCULOSIS.

R—Potassi iodidi ..... 14 grs.
Iodi pur. ....15 grs.
Sodii chloridi .....1½ drs.
Aqua dist. .....2 pints
M. S. Take three or four tablespoonfuls in a glass of milk three to six times daily.—Renzi, Jour. de Med. de Bordeaux.

IRRITABLE BLADDER AFTER CONFINEMENT.

Professor W. E. Fothergill, of Edinburgh, gives a tablespoonful three times a day of the following mixture in post-partum irritability of the bladder:

R—Salol.....
Tinct. of hyoscyamus..Each 2 drs.
Infusion of buchu..q. s. ad. 6 oz.

CHAPPED HANDS.

In Germany the following formula is used for chapped hands, the application being made twice a day:

R—Menthol .....10 grs.
Olive oil .....
Salol .....Each 20 drops
Lanolin .....1½ fl. oz.

SMALL-POX.

In treating many small-pox patients, Dr. Th. Faure, surgeon to the hospital at Chaux-de-Fonds, Switzerland, has found that frequent applications to the eruptions of the following iodoform collodion prevent any trace of pitting:

R—Iodoform .....30 grs.
Collodion .....1 oz.

ULCERS OF THE LEG.

Dr. E. A. Edlen (New York Medical Journal, vol. lxiii) has found the following ointment valuable as an application once a day, and varied in the proportions to suit the case:

R—Carbolic acid .....2.0 parts
Boric acid .....10.0 parts
Powdered camphor.....7.5 parts
Ichthyol .....20.0 parts
Oil of citronella .....q. s.
Zinc oxide to make up to 100 parts

The Times and Register.

VOL. XXXIV. No. 2. PHILADELPHIA AND BOSTON, JULY 24, 1897. WHOLE No. 942

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Original

ELECTRICAL FORCE IN MAN AND NATURE.

BY JOHN J. CALDWELL, M. D., BALTIMORE, MD.

"The wires that pervade ocean, ether and land
Are the chains that bind nations together."

All phenomena of the organic or inorganic world are now being interpreted in terms of matter, motion and force. The pilot idea of the doctrine of evolution to-day is that everything proceeds from the simple to the complex, and that back of all the manifestations of matter and of mind there lies "unity of force." It is this acting, living, persistent principle which constantly sits at the loom of time and arranges the position and the texture of the threads that makes up the web of things. This ancient weaver, called "Force," has received many different names. When it works among molecules we call it cohesive attraction. When it works among the ultimate atoms, building them up into the delicate and beautiful crystals, we call it the crystallizing force. When engaged in uniting kindred atoms we call it chemical force or chemical affinity. Our meaning, however, is sufficiently indicated without further extension of the list of forces.

Nature delights in prodigality of results, but she is parsimonious in the number of her working powers. Given a little matter and motion, and she will construct a world. The lines of force radiate in all directions, always acting; always persistent. Difference of result is but the product of the same force, differently conditioned. A tree and a mammal exhibit the same parent force. In the ultimate analysis we reach simplicity of cause and "unity of force." Verily, there is "unity in variety and variety in unity." All that science can do, armed and equipped as she now is, if truthful to her

high calling, is to recognize the great fact that back of all the working energies of nature there lies the light of a universal intelligence, so guiding, controlling and compounding the manifold manifestations of "force" as that the final outcome of all shall redound to the best good of the creature and the everlasting glory of the Creator.

We have, thus, in a general way, indicated the essential unity of "force" and the great diversity of its results. But here we must stop. What force is, per se, we know not. We can only watch the play of its untiring activities throughout the realm of nature:

"Mysterious essence, vital Force,
We fain would all thy secrets know;
Would find at last the hidden source,
From whence thy power doth ever flow."

"But ours, alas, is finite sphere;
A larger vision by and bye
Maybe will solve what puzzles here;
Till then on trusting faith rely."

Perhaps one of the most impressive instances of the play of force is to be seen in the phenomena of light. Light is but a result of the rapid oscillations of the ether waves. Hundreds of millions of these waves strike the retina per second before we are conscious of the sensation of light. How this sensation is translated into consciousness is a mode of force of which we know nothing. One fact, however, has been determined; viz., that color is a result of motion. Less rapid oscillations are required to produce in us the sensation of the red in the spectrum than of the violet. Electric light, which is the most intense of all light, is but a product of exalted motion. This can be beautifully illustrated by suspending a rod in a darkened room, with machinery attached, so as to increase its motion at pleasure. A certain degree of motion produces sound; this motion, increased, produces heat; a further increase produces all the colors of the spectrum in their regular order. Still exalting this motion we obtain electric light.

What more beautiful demonstration of the unity, and yet of the diverse action of motion, which is only another name for force. But it were useless to give, in detail, even a tithe of the protean results of this silent and unobtrusive energy.

Force, being persistent, must always act; it must produce results. Harmony in result implies harmony in the conditions under which force is brought to act. Want of harmony in result implies a want of harmonious conditions. Hence, what are called freaks of nature, monstrosities and all forms of diseased action.

The theory of wave motion in the ether had its origin in the wave motion of water and the atmosphere. The ear sustains the same relation to sound that the eye does to light. There is a close analogy between the harmony of sound and the harmony of color. The rhythm of sound has its unvarying conditions in reference to the human ear. Atmospheric vibrations, when they exceed a certain number per second, lose their individuality and become merged into a hum or indistinct sound. The auditory nerve is finely adapted to take in the whole range of the gamut. Sounds, higher or lower, in either direction, cease to be distinct. It matters not from whence we take our illustrations of the "Play of Force," we still find it in the ultimate analysis, persistent and a unit. The harmony of the universe is everywhere apparent. Order, design, adaptation and law are everywhere discernible. Force reigns supreme. Its workings are written in living light throughout the organic and inorganic world. It flashes in the light and glows in all the colors of the spectrum. It proclaims itself in all the harmonies of sound, and in the most complex workings of the brain. Space, boundless, ever-reaching space, is its workshop. And time, never-ending time, is constantly recording its mighty results.

It remains to say a word in reference to the more special manifestations of force. The human system supplies the most appropriate example. From the persistence of force we can but conclude that between the mind and the body there is the

closest relation, sensation, thought; and our most involved sentiments imply the destruction or waste of the gray tissue of the brain molecules. This waste is only another name for one mode of the "Play of Force." In a word, Man, as he is, is but a product of Force, acting in the first instance on a germ hardly microscopic, and mind, with all its wonderful and complicated powers, is evolved from the simplest beginnings. A Raphael or a Newton are evolved, in common with the lowest order of animal life, from the product of the same force, controlled and governed by the same law, which has its fitting conditions and relations. Want of harmony in these, as we before remarked, implies want of harmony in result. A healthy mind, healthy morals and a healthy religion are the resultants of the unimpeded action of force.

A knowledge of the brain and of the network of the nervous system is essential to every educated physician who would minister to a body or to a mind diseased. The ability to maintain a proper medium through the exaltation or depression of nerve power is requisite to him who would understand correctly the nervous system. Her path to universal empire will continue to be, as it is now, dotted all along with rejected theories. She is now making rapid strides, and has indeed become an ocean of truth. Let us keep abreast, at least, of that portion of its mighty tide which is now carrying the science of medicine onward, far onward, beyond its ancient landmarks; enriching it with new truths and ennobling it with new laurels.

Just how electricity acts as a therapeutic agent no experimenter has satisfactorily explained, though learned minds, at home and abroad, have elaborated ingenious erudite theories, simple and complex, still we will maintain our text, "The Unity of Force." We will again note that electricity is but another name for the most exalted motion known to the human intellect. We will then be able, in some degree, to comprehend its action upon our bodies, and its true place in medicine, and how it acts through the brain, and its infinite ramifications:

Nerve velocity is sixty yards per second.

Sound velocity is 332 yards per second.

Cannonball velocity is 550 yards per second.

Light velocity is 360,000,000 yards per second.

Electricity velocity is 450,000,000 yards per second.

"With armies of signs I have girdled the world,
I am felt in the words they indite;
They move on their way with no banner unfurled,
With a speed that is greater than light."

Hence it can be readily understood how electricity's direct action may accelerate our natural forces; how its reverse action may depress them; how its chemical action may dissolve or electrolize morbid growth. How we may dilate the vascular system, or accelerate the vaso-motor, and how through the sympathetic system exalt the trophic powers, or produce inhibitory action.

"Man still remains unsatisfied,
Still strives to mend his state;
What! though the months are changed to days,
When speeds him on his distant ways,
Impatient, still, at time's delays,
He never learns to wait.
And only when the lightning's flash
Submissive, owns his power,
And, humble as a cringing slave,
Bridges for him the Atlantic wave,
He rests a single hour;
When Volta's pile and Franklin's kite,
And Morse and Henry all unite
To give imperial sway."

The attention of electricians was concentrated upon electro-physics until the perfection of the mechanical contrivance by Morse. In due time it was known to the medical profession that electricity was a powerful therapeutical agent, and its application in the treatment of disease wrested from the hands of

quacks and charlatans. Electrotherapy is now an important specialty in medicine. The close analogy of electric to nerve force at once caused attention to be directed to its employment in the treatment of nervous diseases; but experiment has shown that it is applicable to the treatment, the relief and cure of other pathological conditions. Thus it may be used as a tonic in cases of nervous debility, in cases of paralysis, so as to take the place of nerve force which presides of functions of nutrition. The nutrition of the paralysed limb is thus sustained, and likewise the revival of nervous energy promoted. It is apparent from the close analogy of electricity to nerve force that this agent embraces a wide range of morbid conditions. Through the nervous cords, which act as conductors, every part of the animal organism can be reached. In this way secretion and elimination of morbid products may be promoted, and the organ or apparatus restored to healthy action. The three great forces of nature are heat, light and electricity. These are the forces under whose influence vegetation is produced. Heat and moisture cause the germ of life in seed to awaken, the materials stored up for the use of the embryo undergo changes both chemical and mechanical, so as to be fit for appropriation. The architecture of the plant begins. A spine shoots up from the bud, under the influence of the sun's light, the food afforded by the atmosphere is appropriated. Forces are active at the root, forces are active in the blade. There is no doubt in my opinion that electricity is one of the active forces which contributes to plant growth. We have all the conditions of its generation—heat, moisture, unequal heating of different mineral substances, causing thermo-electricity. We also have chemical action. It is impossible to draw a line of demarcation between vegetable and animal structure, and doubt not that heat, light and electricity are the physical forces under which animal structure is built up. The light of the sun is as necessary to the vigor and health of the animal as of the vegetable kingdom. Indeed, as already stated, the two shade into each other so as to render it impossible to say where the vegetable ceases and the animal begins. Electricity, being one of the forces which contributes to the animal organism, is necessary to functional health.

The various conditions under which electricity is manifested enable us to apply it to a variety of morbid conditions. Its wonderful decomposing power (electrolysis) has been utilized by the physician. The intense heat incident to its manifestation by certain combinations has enabled the surgeon to substitute in many cases the cautery for the knife, indeed, to apply it to the section of morbid growths not remedial by the knife.

It may be stated, in order that progress shall be had in any branch of science, appropriate apparatus is necessary. Scientific speculation is a great lever, but it must be controlled by experiment, speculation must be tested by experiment, for the human mind is too apt to be seduced by the pleasures of speculative philosophy, and too prone to abandon the paths of observation and sound induction.

From the want of apparatus and the ignorance of its different modes of manifestation, electricity as a therapeutic agent was seized upon by the charlatan and neglected by intelligent practitioners of medicine. By a curious coincidence the discoveries in electric science and improved apparatus were accompanied by great discoveries in regard to the functions of the nervous system. Whilst Oersted, Ampeere, Faraday and others were making rapid strides in electric science, Sir Charles Bell, Mayendie, Marshall Hall, Claude Bernard, Brown-Sequard and others were unraveling the intricacies of the nervous system. In no era of the world has there ever been such activity in scientific investigations and the applications of science to the material comfort and welfare of mankind.

At last, the votaries of medicine contribute their quota, and many of the most eminent of the profession are devoting their talents and energies to the therapeutical effects of

electric force in the treatment of disease.

We have been induced to try the effects of electricity in cases of suspended vital function, resulting from narcosis, and cases of apparent death from drowning, from experiment upon living rabbits, made by Dr. Wilson Phillips, of England, from which it appears that electric force was used to substitute nerve power. The pneumogastric nerve of the animal was severed immediately after it had eaten some parsley. After the death of the animal, which had great difficulty of breathing, and perished apparently from suffocation, the stomach was opened and the parsley found undigested. A similar experiment of section of pneumogastric nerve was made, but a current of galvanism passed along the nerve, and continued for twenty-six hours. No difficulty of breathing occurred as long as the current was kept up. The animal was killed, the stomach examined, the parsley was completely digested. It thus appeared that galvanic energy is capable of supplying nervous influence in that the process of digestion may be carried on. Similar experiments were made upon dogs with like results.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

THORACIC TUMORS.

(Continued)

THORACIC TUMORS—THOSE ON ITS DORSAL ASPECT OF AN INFLAMMATORY CHARACTER.

All tumors, wherever situate, contain many elements of inflammatory hyperplasia. These are incidental to the evolution of the growth.

Carbuncle is made up entirely of the products of inflammations, plus the most virulent bacteria of suppuration and gangrene, the streptococci and the bacterium-termo.

These can be "nipped in the bud," so to speak, wherever they spring from, every time with ease, safety and security, without any mutilating procedure, without the aid of anesthetics, without any sufferings or shock to the system.

Oh, that the time had come when

the same might be said of the dread epithelial ingrowth of cancer, or the empyemic changes of sarcoma.

TREATMENT OF THE INTEGUMENT.

The means for destroying carbuncle in any of its stages are by mummifaction of the growth with aid of liquified, pure carbolic acid.

One begins by cleansing the cutaneous surface and spraying it well with ether.

HYPODERMICATIVE OR INTRAPARENCHYMATOUS INJECTION.

Now we charge a hypodermic syringe with the warm dissolved crystals of carbolic acid, or, if heating be not expedient, a saturated solution will suffice. If the tumor be yet small, of the incipient, papillary variety, we inject well into its base one, two or three drops.

It is injected slowly. In a moment we will see the residue of the acid make its way out through the papilla; but one injection will usually suffice in this type, at this stage. When the tumor has considerably enlarged and is suppurating and has several openings we may not only enlarge the dose, but likewise augment the number of injections. In a massive fungating carbuncle on the back of the wife of a physician this last spring I found it necessary to make four punctures and inject 40 drops of the acid.

In all cases the effects are most extraordinary, the phenic acid at once and permanently annuls the agonizing pain, the violent throbbing ceases, the patient moves about with freedom, appetite and sleep return. The transformation is indeed extraordinary. As a prominent physician of New York, who was my patient this spring, remarked, that one like him, who had been cut under the older method, could best appreciate the marvelous potency of this simple method.

CONSECUTIVE TREATMENT.

All these patients need bark, quinine and iron, preceded by a mild mercurial purge.

As for the carbuncle itself, in the average case there is little to do after injection.

Tumifaction disappears, the core hardens, becomes detached and thrown off, when we have a simple ulcer to treat on general principles.

The theoretical objections against this method are without support. There is no danger of systemic toxemia, because the pungent acid at once unites with the albuminous elements, the pus and blood, promptly destroys all germs and leaves a painless eschar.

MAMMARY TUMORS.

These will be considered later under the general head of primary neoplasmata, though no attempt can be made to give them the detailed consideration found in special treatises published on the subject.

MISCELLANEOUS TUMORS OVER THE THORACIC WALLS.

I have met with a few rather unusual types of tumors over the anterior and latteral chest walls. In one young woman and in a middle-aged man I have found incased under the pectoralis major —right side in both—large, rather flattened tumors with many features simulating cysts, which on dissection proved to be lipomata.

A young man came under my care three years ago with about all the grosser signs of an axillary aneurism. A consultant verified my diagnosis. He went to a Homeopathic physician, who told him he had no aneurism, and, sure enough, when I examined him some six weeks later every trace of it had disappeared. It was purely an aneurotic manifestation of the vaso-motor nerves, with cardiopathic disturbance.

From one case, a young woman, I removed an axillary growth the size of an orange, which proved to be a dermoid cyst.

Two years ago I dissected away an extensive primary keloid mass from the subclavicular region of a middle-aged man, who gave no history of trauma.

ENCEPHALITIC AND LATE EPILEPSY.

BY JAS. G. KIERNAN, M. D., Chicago, Ill.

Foreign Associate Member French Medico-Psycholigical Association; Fellow of the Chicago Academy of Medicine; Professor of Forensic Psychiatry, Kent College of Law.

Epilepsy occurring after 25 and that due to encephalitis have points of special interest in common. Epilepsy following on the various forms of infantile encephalitis exhibits in my experience many peculiarities. It is more apt to be accompanied by trophic phenomena of the extremities varying from the simple "dead fingers" to phenomena nearly approximating Raynaud's disease. It reacts badly to the bromides. Mental symptoms, fits of temper, of sullenness, of depression, or even destructiveness, replace under the bromides the convulsive attacks. The tendency to impairment of the circulatory innervation of the extremities is increased. The various bromic dermatoses appear with comparatively great frequency. In not a few instances, these eruptions have proven unduly severe and protracted. A nocturnal mental type takes the place often of the convulsion. It is attended by phenomena closely resembling those of somnambulism. In some few instances an intense pruritus results. While the dermic phenomena due to the bromides yield to arsenic, calcium sulphide, etc., still these ameliorations are very temporary, and the original phenomena recur after a time. As Spitzka has pointed out, epilepsy is a diseased state of the encephalon without a palpable characteristic lesion, manifesting itself in explosive activity of an unduly irritable vaso-motor centre, leading to complete or partial loss of consciousness which may be preceded or followed by various phenomena expressing the undue preponderance of some and the suspended inhibitory influence of other cerebral districts. The patho-anatomical changes found in patients suffering from this disease throw but little light on pathological physiology. Certain vascular phenomena accompany an epileptic attack so constantly that they have been considered the fundamental essential factor of epilepsy. Suddenly produced anemia of the higher nerve centres will, it is true, produce convulsions. But it does not follow that the arterial spasm is the direct cause of the epileptic fit. The convulsion, while a phenomena of the fit, is neither an initial nor is it as constant as it should be were the Kussmaul-Tenner theory correct.

Nor does the discharging lesion theory of Hughlings-Jackson explain the phenomena of epilepsy. That an irritive lesion of different portions of the brain may result in epileptiform explosions is no proof that the idiopathic epileptic attack has a similar origin and is due to similarly located foci of impalpable disease. Take an inflammatory softening on or near the cortical area which stands in a relation to the muscle of the arm; epileptiform spasms may be a symptom of such a lesion and they may begin in the particular muscle whose "centre" is affected, they may then extend to the other muscles of that half of the body or suddenly to the entire voluntary muscular system. Is that proof that the epileptic "discharge has extended through the cortex by irradiations?" It does not seem that this could be maintained in cases where the transition from the localized, or, as it were, "focal" spasm to the general convulsion was sudden. It seems more probable that the primary irritation has determined a secondary irritability of the great convulsive centre of the body, namely, the reticular gray matter of the brain isthmus, particularly of the pons and medulla. Starting with the fact that all characteristic features of the full epileptic onset can be produced in animals, deprived of their cerebral hemispheres working, a satisfactory hypothesis of the nature of epilepsy can be obtained. It needs

but a slight puncture with a thin needle to produce typical convulsions in the rabbit and some of the convulsive movements reported by Nothnagel have not only shown the true epileptic character, but also that peculiar automatism noted in aberrant attacks. It is in this segment of the nervous system that all the great nerve strands conveying motor impulses, both of a voluntary and automatic and some of a reflex character, are found united in a relatively small area, and just here a relatively slight disturbance might produce functional disturbances involving the entire bodily periphery.

The experiments of physiologists have shown that if a sensory irritation of a given spinal nucleus be kept up, after having produced a reflex movement in the same segment, if there is any reaction beyond the plane of that segment at all it is not in the next or succeeding plans, but in the medulla oblongata. The motor reaction then manifests itself in laughing, crying or deglutitory spasms and, if the irritation be of the severest kind, epileptic or tetanic spasms in addition. Now the occurrence of laughing, crying or deglutitory spasms could be easily understood if the molecular oscillation induced by the irritation were to travel along the associating tracts from the given spinal segment to the nuclei of the medulla oblongata. For in the medulla there are found the nerve nuclei which preside over the facial, laryngeal and pharyngeal muscles. It is not easy at first to understand how tetanus and epilepsy, that is, spasms consisting in movements whose direct projection is not in the medulla oblongata, but in the cord, can be produced by irritation of the former.

There are scattered groups of nerve cells in the medulla oblongata which have either no demonstrable connection with the nerve nuclei or are positively known to be connected with the longitudinal associating strands. These cells hence can safely be regarded as representing a presiding centre over the entire spinal system. No spinal centre exerts any influence even remotely, as pronounced as that of the entire cord. This applies to man and other mammals. That the elaboration of the medullary centre was as gradual a process as that of other higher differentiations is illustrated by the case of the frog whose medulla has acquired the faculty of reproducing general spasms while the spinal cord itself retains this property also; hence here the predominance of the medulla is not so marked as in mammals.

The reticular ganglion of the oblongata is not in the adult a part of the central tubular gray matter, but has, through originally developing from it in the embryo, become ultimately isolated from its mother bed. It constitutes a second ganglionic category, and the association fibres bringing it in functional union with the spinal gray (first category) in lower animals and shown to have assumed the position of projection fibers in the higher to constitute a second projection tract; both together are a second projection system. The scattered gray matter of the medulla has an (inferentially) great importance. Anatomically it is (though its cells be scattered diffusely as a rule) a large ganglion with numerous multipolar cells of all sizes, many of them of gigantic size, sometimes exceeding the so-called motor cells (which they simulate in shape) of the lumbar enlargement in size. Scattered in the "reticular substance" of the medulla from the upper end of the fourth ventricle to the pyramidal decussation they merit the collective designation of reticular ganglia.

The cells of the reticular formation are known to be connected with the nerve nuclei on the one hand, and with longitudinal fasciculi which since they run into cord, terminate either in the gray matter (or the nerve roots directly) for nerve fibres do not terminate with, as it were, blind ends. Now in the mammalian brain the reticular ganglion lies scattered among fibre which come from the higher centres and the interpellation might be made, whether, after all, the reticular ganglion be not a mere intercalar station for fibres derived from a higher source. That originally the ganglion was an independent station there can be no rea-

sonable doubt, for in reptiles this body of cells is too considerable to account for a termination in them of the few cerebral fibres possessed by these animals. And on the other hand, the vertical strands are notably increased in their passage through the field of the medulla oblongata.

The medulla oblongata with its reticular ganglion seems to be the great rhythmical centre. In fish, the movements of the operculum and mouth, in sharks those of the spiraculum; in perenni-branchiate amphibians, the branchial tree, in the infant the suctorial muscles, in all vertebrates the movements of deglutition, of the heart and respiratory muscles, all movements presenting a more or less regular rhythm, are under the control of the medulla oblongata. The early differentiation of the part of the cerebro-spinal axis is without doubt related to the early manifestations of rhythmical movements in the embryo and their predominant importance in lower animals. The possibility should not be excluded that a rhythmic movement may be spinal, nay, even controlled by peripheral ganglia (heart of embryo). A higher development, however, implies the concentration of rhythmic innervations at some point where that anatomical association may be effected, which is the expression of the mutual influence these movements exercise among themselves.

Two sets of phenomena need be borne in mind in studying the physiological pathology of the epileptic attack. First, the condition of the epileptic in the interval. Second, the explosion itself. Too much attention is paid to the last, too little attention to the first. The constitutional epileptic is characterized by a general deficiency of tonus associated with exaggerated reaction and irritability. Thus the pupils are at once widely dilated and unusually mobile. The muscular system, though generally relaxed, manifests exaggerated reflex excitability. The mental state is characterized at once by great indifference and undue irascibility. In the same way the vascular system is depressed in tone in the interval with rapid marked changes under excitation. The state of the nervous system, as a whole, Spitzka forcibly compares to that of an elastic band, which, being on the stretch continually, is apt to overshoot its mark when one end is let go. Under normal circumstances the band is less stretched and hence not as liable to fly so far when the check is removed.

An irritation, which, in health, produces restlessness of the muscular system, accelerated respiration and pulsation, and various mental phenomena within the normal limits, in the epileptic results in more intense phenomena in the same direction. The nervous irritability of the epileptic manifests itself in one direction especially. An important vaso-motor centre for the brain vessels exists, possibly diffused through an area somewhere between the thalamus and sumthalamic region above and the pyramidal decussation below. The irritability of this centre results in the sudden arterial spasm in the carotid distribution (so characteristic a feature of the fit onset); simultaneously with the contraction of the vessel, the pupil undergoes an initial contraction, and relaxation instantly results in both cases. The sudden interference with the brain circulation produces unconsciousness, and destroys the checking influence of the higher centres on the reflexes in a manner analogous to any shock affecting the nerve centres. In the meantime, while there has been a sudden deprivation of arterial blood and a sinking of intercranial pressure so far as the great cerebral masses are concerned there has been as sudden an influx of blood to the unaffected district of the vertebral arteries whose irrigation territory is now the seat of an arterial hyperemia. The result of this is that the great convulsion centre, the medulla, being overnourished, functional excess, that is, convulsion, occurs unchecked by the cerebral hemispheres which are disabled by their nutritive shock. The unconsciousness and coma of epilepsy more resemble shock than they do cerebral anemia or syncope. The impeded return circulation of venous blood now

comes into play. The contraction of the neck muscles explains this obstruction and the accumulation of venous blood in the cerebral capillaries of the medulla especially. Meynert's opinion, that this venous blood by the formation of cyanide-like substances acts as a toxic agent and produces the severer symptoms noted during the post-convulsive period, has been recently supported by the finding of convulsant urine toxins by Fere.

In addition to those sustaining the "rubber-band" analogy, the following facts tend to demonstrate the view just expressed. First (a) the contraction of the retinal artery; (b) the initial and very brief contraction of the ordinarily dilated pupils; (c) the sudden pallor of the countenance. Second, (a) the secondary expansion of the retinal arteries; (b) the secondary dilation of the pupils; (c) the secondary flushing of the face. Third, the post-mortem appearances found in those dying immediately after the severe convulsive seizures.

True epilepsy presents an enormous number of sub-groups, exhibiting every variety of deviation from the ideal convulsive form, and the existence of these forms tends to demonstrate the views just expressed. In ordinary petit mal the initial arterial spasm has but to be confined to the surface of the hemispheres, leaving the thalmus ganglia undisturbed, and it can readily be understood how the momentary unconsciousness or abolition of cortical function can occur without the patient falling, his automatic ganglia still carrying on their functions. At the same time with the lesser spasm there would be a less extensive sinking of intracranial pressure and less consecutive collateral hyperemia of the lower centres, and therefore no convulsion.

As Meynert has suggested, in certain cases the arterial spasm may fail to affect the entire cortical surface simultaneously, some one trunk may be more pervious and as afflux of blood may occur in its special field where certain impressions and motor interventions are stored; the result will then be that the function of the relatively well nourished territory will be exalted. If it be a visual perception territory, sights, colors of luminous spectra will be seen; if it be an olfactory territory, odors will be smelt; if a tectile centre, crawling, tingling and cold sensation; if a speech centre, cries, phrases and songs may be observed. This explains the manifold epileptic aura, which is simply an isolated, exaggerated limited cortical function. The recurrence of the aura is readily explicable on the ground of the well-known physiological law, that any nervous process, morbid or normal, having run through certain paths, those paths will be the paths of least resistance for that process to follow in the future. To an extension of the same conditions are due the peculiar convulsive, equivalent, and post-epileptic mental states.

Encephalitic epilepsy, while in many cases possibly Jacksonian at the outset, but too often becomes an epileptic constitution, with all the phenomena of idiopathic epilepsy underlain by the pathology just enunciated.

After the age of 25, and most frequently between 35 and 40, in persons with no very decided neurotic heredity, and in most of whom lues can be excluded, occurs an epilepsy which resembles in many respects the epilepsy from encephalitis. As a rule, in these cases, which I have found equally divided as to sex, there has been a precedent period of nervous exhaustion, attended by vertiginous states as its later development.

These vertiginous states are often preceded or followed by anamalous sensory disturbances, frequently compared by the patient to "waves." They pass into states attended by loss of or dazed consciousness, with or without motor explosions. Some of these vertiginous states, even when with consciousness are attended by localized jerkings of groups of muscles.

All these phenomena are clearly due to toxic resultant on nerve exhaustions, which produce the effect that Meynert long ago showed was due to them in ordinary epilepsy. Under normal circumstances, the toxins and ptomaines which are pro-

duced in the organism are eliminated by various channels. Some of these products are transformed in the alimentary canal into innocuous substances; gases are eliminated by the lungs; other compounds are intercepted and decomposed in the liver; lastly, certain effete products are eliminated by the kidneys and skin. When any of these emunctories is interfered with in the discharge of its functions the phenomena of auto-intoxication make their appearance. This is observed in certain affections of the alimentary system, for example, which are attended by such symptoms as headache, pallor, hypochondriasis, etc. These manifestations, which are the result of a chronic auto-intoxication, were not improperly attributed by the older writers to disturbance of the hepatic functions. As Schopfer* has lately shown, the liver, by its peculiar intrinsic action, due to the specific activity of its cellules, can diminish the toxic power of the alkaloids with which it is brought into contact. Such action is manifested, not only in the case of poisons introduced through various channels into the organism, but also in the case of poisons elaborated internally within the organism itself in consequence of putrefactions of the products, due to the activity of the tissues. He hence advises intestinal disinfections and special alimentation, so as to obviate or to minimize "auto-intoxication in all maladies in which the liver does not perform its functions normally." One therapic great element in preventing the recurrence which constitutes the "epileptic habit" is hence diet. As a rule, the epileptic should be limited chiefly to a farinaceous diet. This should be varied in itself, and by slight amounts of the more digestible meats, beef or mutton. Berries or small seed, fruit, pineapples, bananas, parsnips and turnips should not be eaten and the amount of potatoes should be limited. Large quantities of water should be drunk. In this way the necessity for artificial intestinal antiseptics will be greatly limited.

As Dr. J. M. Soniat, of New Orleans, remarks: "Recent biochemical researches, by revealing the action of toxins, ptomaines and leucomaines, have thrown much light on the action of a class of remedies which the older therapeutics called alteratives, which Headland, however, denominates catalytics. This class of remedies, as Headland points out, has the following action: They act in the blood, and their effect is permanent. Each of itself tends to work out a peculiar operation in the blood. The diseases in which they are used depend on certain morbid materials or actions in the blood. The result of the action of a catalytic medicine is in some way to neutralize or counteract some one or more of these morbid processes. These medicines are all unnatural to the blood and must at length pass out of the system. These properties indicate their use in incipent sclerotic states. The recent developments of biochemistry and bacteriology demonstrate that organic compounds produced by bacteria and by metabolism are the origin of secondary pathological tissue change. Scleroses of all types may result from such action. Behind many forms of cirrhosis, renal, hepatic or gastric, is the ptomaine of syphilis.

The foremost metallic alteratives are arsenic, gold and mercury. Gold is an old remedy, but early in the seventies came into prominence because of its affinity for nerve tissue when used as a stain in preparation of microscopical sections. These remedies were found to act best in combination with chlorine, iodine and bromine, while all of these last had an alterative action. Chlorine and iodine were long the chief favorites. Bromine widely used in neuroses attracted less attention as an alterative, although when first discovered it was chiefly so used. Dr. James S. Jewell,* who incidentally noticed through its employment in neuroses that bromine seemed to have a specific action on the formation of connective tissue, remarks:

"Some years ago I called attention to a class of cases in which there was chronic diarrhea, or a tendency to-

*American Medico-Surgical Bulletin, 1894.

*Chicago Medical Review, Vol. 4.

ward looseness of the bowels, more or less gastric catarrh, sallow skin, but clear conjunctiva, gastric uneasiness, habitual deficiency or absence of bile from the bowel discharges and clearly evident (from palpation and percussion) hepatic contraction. In these cases there is actual hepatic atrophy. In them the persistent use of bromine internally has had good results. Its action is slow and it must be continued for months to be of permanent benefit. The bromine is given in distilled water, ten drops of the liquid bromine to the ounce of water. Five drops of this solution should be given thrice daily to begin with. The dose should be increased one drop daily until it is plain the stomach will no longer tolerate a large dose. If the stomach becomes irritable, as a result of the remedy, it may be desirable to reduce the dose to one or two drops, or even cease its use altogether for a time, to resume when the stomach will tolerate it again. It should be given in a considerable quantity of water, as it is likely to irritate the stomach otherwise. Under the use of bromine I have usually seen after a time less disturbances in the gastric zones, less diarrhea, a reappearance of bile in the discharge from the bowels and a slow but decided improvement in the patient's general health.

The alteratives are hence peculiarly suited for treatment of states due to toxin, even antecedent to sclerosis. By destruction of the toxin through stimulus of hepatic action and elimination, they tend to prevent its accumulation and the phenomena resultant on this. The alkaline bromides do not seem to exert this influence, hence in no small degree their untoward effects. Of late metallic bromides have been (it is claimed) united in two compounds, the liquor arsen. auri, Barclay; (arsenauro), and liquor arsen. auri et. hydrarg., Barclay (mercauro). These two compounds alternated weekly give in the types of epilepsy to which allusion has been made undeniably excellent results. Twenty drops in four doses daily are given, gradually increased by two drops daily until slight sialorrhoea or looseness of the bowels occurs, when the dose is reduced by two drops. None of the untoward effects of the bromides have been observed. Cases stupefied by them have reacted excellently. Like all beneficial effects of alteratives, improvement is at first slight, but increases in geometrical progression.

Of course, certain symptoms require special treatment, and an excellent adjuvant to dietetics and the alterative treatment is nitro-glycerin, which a little less than two decades ago, acting on basis of the morbid phenomena described, was introduced on therapeutical grounds without reference to bromide untoward effects. It was found by neurologists that it had neither the tendency to produce mental symptoms by suppression of the epileptic discharge, nor yet the distressing dermic phenomena. Spitzka found it of especial value, given at shorter intervals than the bromides, in 1-50 grain doses. Trussewitch points out that it should be used when there is a defect in the equilibrium of the vascular tone and the blood is irregularly distributed. It causes a rush of blood to the anemic district or unloads the hyperemic. He finds, as did Spitzka, that after a time there comes a toleration of the drug. It should then be dropped for one or two weeks, when susceptibility will be regained. Osler finds that the physiological effects must be apparent before good results are obtainable. It controls, given on the principles indicated, the restlessness, the temper, as well as the motor phenomena of these epileptics. It is best given eight times daily in 1-250 grain doses.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

THE MECHANISM PRODUCING THE FIRST SOUND OF THE HEART.

Sir Richard Quain, in a paper read before the Royal Society of London, June 3, 1897, has attempted to disprove the theories commonly credited as the correct causation of the production of the first sound of the heart as the closure of the auriculo-ventricular valves. The drift of the discussion, as it appears in the Lancet for June 19, is somewhat as follows:

Sir Richard Quain, after referring to the doubt existing as to the cause of the first sound, continued:

It seems to me to be desirable, amidst such differences of opinion, to solve a problem which has its special interest and its special importance. Two of the most striking events which take place during systole—namely, the closure of the auriculo-ventricular valves and the muscular contraction of the ventricular walls—are regarded by many authorities as the sources whence the first sound proceeds. The result of my investigations, on the one hand, leads me to the conclusion that neither of these explanations is satisfactory, and, on the other hand, enables me to indicate what I believe to be the real explanation of the phenomena.

A. The action of the auriculo-ventricular valves is not the source of the first sound of the heart. The mechanism of these valves (the mitral and the tricuspid) and their action do not possess the elements necessary for the production of such a sound.

Sir Richard Quain here gave an account of the action of the valves and proceeded:

Further evidence on this point may be found in another direction, namely, in the fact that the first sound can be heard independently of the existence and action of mitral and tricuspid valves. Aware of the fact that in some of the lower animals, more especially in the reptile class, the auriculo-ventricular valves exist in but a very rudimentary form, I obtained permission to examine some of these creatures in the Zoological Gardens, and spent many hours on many occasions in the investigation, assisted by my valued friend, Dr. John Sibbald.

Sir Richard Quain then referred to the first sound being audible in the python and the kangaroo—which have only rudiamentary auriculo-ventricular valves.

Objections will no doubt suggest themselves to the view above expressed. For example, the clinical physician will say, "I am in the daily habit of hearing a distinct murmur accompanying the systole in cases of diseased heart, and apparently replacing the first sound. On examining the heart after death I find the auriculo-ventricular valves diseased —a condition which I therefore connect with the murmur." It will at once be seen that we have here to deal with morbid sounds, totally different in character and totally different in the seat and mode of production, from the first sound of the heart. To make the explanation more simple I will confine my observations to two principal forms of mitral disease associated with systolic murmur—namely, first, imperfection in structure with distinct regurgitation, and, secondly, induration, roughness and irregularities on the mitral valve.

Sir R. Quain described (a) the mitral regurgitant murmur and (b) the systolic murmur without regurgitation. He continued:

These murmurs, striking and characteristic as they are, are merely accidental complications which occur at the moment of the systole of the heart, but they are unconnected with, and have no relation except in point of time to, the healthy first sound, which may be heard apart from and independently of them. The weight of evidence, then, is clearly against the possibility of the structure or the functions of the auriculo-ventricular valves being the source whence proceeds the first sound of the heart.

Two other phenomena occur synchronously with the systole of the heart, and consequently with the occurrence of the first sound. They are (a) the contraction of the muscular walls of the ventricles, and (b) the propulsion and movement of the blood from the ventricles into the arteries. I shall first consider the supposed share which muscular contraction has in the formation of the sound.

B. The muscular contraction of the walls of the heart during systole is not the source of the first sound of the heart.—The sound produced by muscle during its contraction was first described by Dr. Wollaston. He compared it to "a sound which resembles most nearly that of carriages at a very great distance passing rapidly over a rough pavement." It is very difficult to conceive the slight, soft, rolling sound produced by muscles in action being convertible into a loud, booming first sound of the heart. Yet the theory is accepted. If muscle during contraction could produce so marked a sound we should expect to find that the powerful muscles of the neck attached the the base of the skull and those attached to the jaw (being through the bones of the skull in direct relation with the hearing apparatus) would give us some striking evidence of the production of muscular sounds when they are thrown into strong action. But there is nothing of the kind.

Experiments have been employed to show that the contraction of the muscle is a source of the sound. Hurthle and Einthoven show graphically that the first sound begins with the very beginning of the systole, before the ventricle has got power "to open the valves." This observation is entirely consistent with the view I am about to propose. The moment the ventricle begins to contract the impact of the blood against the semilunar valves commences, producing the commence-

ment of the sound, not when the valves are thrown open. The valves being connected with the fibroid ring surrounding the base of the heart, with which also the muscular walls are continuous, the sounds are conducted to the apex. Pathology confirms this view. It was observed by Dr. Stokes that in the course of typhus fever the first sound of the heart gradually disappears. After death it is found that the walls of the heart are softened, and this morbid state has been accepted as a proof that muscular contraction is the cause of the first sound. The real explanation is that the impulse of the heart is so feeble that it is unable to produce the sound at the valves. The correctness of this view is confirmed by the fact, recorded by Dr. Stokes, that the last point at which the sound disappears is over these valves, and that it is at the same point that the returning sound is first heard.

With the object in view of further investigating this subject I requested my friend, Dr. Alexander Morison, to study the heart of a turtle, recently killed, by holding it close to the ear as one holds a watch when testing for deafness, and also by pressing it gently against the ear. With this intention I gave him an introduction to the proprietors of the "Ship and Turtle" tavern, where he had the fullest opportunity of carrying out the investigation. Dr. Morison writes to me: "An opportunity was afforded me of examining the hearts of two large turtles immediately after they were killed. The heart removed from the body was easily provoked into active contraction by a gentle tap with the finger, the contraction being sufficient to expel blood from the cardiac cavity. On placing the ear close to the heart whilst thus contracting no sound could be heard; on placing the ear lightly on the heart whilst contracting no sound could be heard. So far, therefore, as a turtle's heart is concerned—no other that I know of has more vigor of contraction after removal from the body—muscular contraction as a cause of cardiac sound must be excluded." These facts and observations are, in my opinion, sufficient to prove that the contractile action of the muscles of the heart is not capable of producing the first sound of the heart.

Having thus endeavored to show that the cause of the first sound is independent alike of auriculo-ventricular action and of muscular contraction of the walls of the heart, I proceed to consider a third event, the most striking and important of all those which occur during the systole of the heart—that is, the propulsion of the blood contained in the ventricles into the pulmonary artery and the aorta, and herein to indicate what seems to me to be the agency by which the sound is produced.

C. The first sound of the heart is caused by the impact of the blood driven by the action of the muscular walls of the ventricles against the block produced by the columns of blood in the pulmonary artery and aorta, which press upon the semilunar valves.—I would adopt the explanation suggested by my valued friend, the late Dr. C. J. B. Williams, that "sound is a phenomenon resulting from resisted motion." Let us examine the condition of the circulation with regard to this particular point, namely, resisted motion. In this inquiry I have derived most important assistance from the admirable and elaborate researches of Professor Bell Pettigrew, F. R. S., first on "The Arrangement of the Muscular Fibres in the Ventricles of the Vertebrate Heart," published in the transactions of the Royal Society of London, 1864, and, secondly, on "The Relations, Structure and Functions of the Valves of the Vascular System," published in the transactions of the Royal Society of Edinburgh, 1864. These refer especially to the left ventricle, but, at the same time, it is to be observed that what applies to this ventricle applies, only in a lesser degree, to the right ventricle. Professor Pettigrew explains the manner in which the column of blood, projected from the heart into the aorta, is formed by the union of three columns, an arrangement which results from the mechanism of the heart, as fully described by him. These columns ultimately unite into one before reaching the orifice of the aorta. The columns have a spiral motion, which is

the result of the spiral arrangement of the musculi papillares, of the spiral arrangement of the fibres composing the walls of the ventricle, as well as of the spiral shape of the left ventrical cavity itself. These points, illustrating the character of the flow of the current, are shown in the blood-cast from the interior of the left ventricle of a horse, which, by permission of the president of the Royal College of Surgeons, of England, I am able to submit to examination.

By this spiral, or what might be called "rifle," motion the blood is seen to be directed against the segments of the semilunar valves, which are thereby hastily thrown apart, the spiral current being continued for some distance within the aorta. The beautiful rifle mechanism here described is constructed with the definite objects of giving precision to the direction of the moving body against a given point and of securing greater velocity and force in that body—the moving column of blood. We have, in fact, here represented in nature—a matter of the deepest interest to the biologist—the mechanism of the comparatively modern rifle. The resistance to the stream of blood issuing from the ventricle is offered by the block formed by the column of blood resting on the aortic valves. These in their action are described by Professor Pettigrew as "closed by a spiral movement, by which these valves are wedged, and, as it were, screwed more and more tightly into each other;" the movement here—the spiral movement—being caused by "the direction of the sinuses of Valsalva, which curve toward each other and direct the blood in spiral waves upon the mesial line of each segment."

D. Lastly, sounds resembling the first (and second) sound of the heart can be produced artificially in accordance with the view contained in the preceding communication.—The experiment is thus made: A sheep's heart of good size (or that of a calf) may be used. It must be carefully cleared from pericardium, leaving the large vessels and pulmonary veins as far as possible intact. The orifices of the pulmonary veins must be laid into one, so as to permit a sufficient opening into the left auricle through which to divide the attachments of the mitral cusps and the musculi papillares in the left ventricle, taking care in doing this not to injure the aortic segments when detaching the cusp that lies next them. The coronary artery must next be ligatured, and also the innominate artery where it springs from the aortic arch. The right auricle and ventricle should be removed. Through the opening made by laying into one the orifices of the pumonary veins a bone nozzle should be passed. It is well, also, to ligature the auricular appendix and any points from which water may issue when the ventricle is filled. To the posterior orifice of the nozzle rubber tubing should be attached, communicating with a source of water supply, placed on a higher level, and another portion of rigid guttapercha tubing about three feet long should be introduced into the aorta. If now the ventricle be filled with water by means of the tube in the left auricle the water will, of course, pass into the ventricle and thence up the aorta, a portion of the water resting upon and closing the aortic sigmoid valves.

THE MAMMOTH HOSPITAL GRAB OF '95 IN NEW YORK.

It appears that at last, after two years of a bitter and relentless controversy over the iniquitous action of the medical corporations of New York in seizing on all the hospital appointments the subject has, at least for the time, quieted down, though it does not appear that the ends of justice have by any means been satisfied.

It is true that Bellevue Medical College, the pet of Tammany Hall, has been forced to move out of public property and seek shelter under the friendly wing of the University. But even there it is said the dis-

membered faculty clamored for the lion's share from the school that saved them from extinction. Venerable eminent teachers were to be side-tracked or put on the road with the hollow husk of "consulting" appointments or the more euphemistic titles of "Emeriti." It has turned out the old story of "when thieves fall out there is some show for an honest man." The united (?), the "married" faculties were soon the centre of fierce dissension, and the combine went to pieces; the "University Bellevue Hospital Medical College" is already defunct before it ever gave evidence of tangible existence. At this juncture the committee on hospitals was facing the issue on the hospital reorganization of '95. Manley had formally withdrawn his charges against Dr. Austin Flint on the condition that the County Medical Association, instead of making a scapegoat of one man should indict every physician in New York implicated, which was done at the June meeting in the following vigorous terms:

RESOLUTIONS.

First.—Be it resolved, that after a thorough and impartial investigation by the Committee on Hospitals and Dispensaries of the New York Medical Association, it now be declared the sense and belief of this association that the reorganization of the medical service in the public hospitals of New York in 1895, as far as the participation of the medical profession therein is concerned, involved a violation of the code of ethics of the American Medical Association, was vicious in principle and unjust in its effects.

Secondly.—Be it resolved, that this association deprecates and condemns the present system on which the medical management of the Department of Charities is conducted, and with the advent of Greater New York unconditionally pledges itself to leave nothing undone to effect its early repeal.

As will be noted, the resolutions adopted by the County Medical Association went farther than to condemn the code violation, but pledged itself to force the fighting and agitation until the wrong is righted, and it is definitely decided that the general profession have an equal number of the hospital appointments, and the public is led to understand that there are some brains in the medical profession outside the walls of medical colleges.

All this is most gratifying to the great body of general practitioners, as it gives us an assurance that the heart of the medical profession is yet in its right place, and it only needs to properly comprehend a question to justly settle it.

With the aggressive movement of the New York Medical League against against the great and growing hospital dispensary abuse we may soon expect the long-looked for correction of abuses in medical charities, with a possibility for one to hereafter exist by legitimate practice.

HOSPITAL REFORM.

Writing to the Birmingham Daily Post Mr. Lawson Tait says that "we (the profession) are entirely responsible for hospitals, and for all their faults as well as their merits." He maintains that the medical officers of the Birmingham Hospital could make an end of the trouble in a month. As a temporary expedient he suggests that they should assign 30 per cent. of their income accruing from hospital position for the assistance of their "struggling extra-mural brethren." We are sure the "struggling brethren" would decline any such remedy. All they ask from their hospital colleagues is to use their influence to restrict the benefits of hospital treatment to those who need it and cannot afford to pay for it. Neither is it of any use to lay the whole blame on hospital honorary officers. The committees and governors of hospitals are equal or greater culprits. Our contemporary's pages are devoted to a discussion of the whole question of hospital abuse and contain many letters which we have not space to notice at present.

—The Lancet.

Electro-Therapeutics

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HYPOCHONDRIASIS.

In ordinary cases not unsuited to office treatment prescribe appropriate hygiene and medicine and supplement these by the galvanic and static currents.

If the patient is in a state of profound nervous exhaustion the preliminary sittings may be devoted to central galvanization repeated daily for about a week.

When central galvanization is too troublesome, and in other cases after it has been first employed, seat the patient upon the static platform connected with the positive pole. Ground the negative pole and gradually develop a full tonic and nutritional treatment as rapidly as the patient becomes accustomed to the apparatus.

Beginning with simple positive electrification next ground the multiple point breeze electrode and with the machine in moderately rapid action sweep the electrode rapidly up and down the spine and over the head for about five minutes. Make decided impressions upon the spinal centres at the back of the neck and in the lumbar region, applying to them a strong, stimulating breeze. Repeat this over the solar plexus, the liver and spleen.

As soon as the patient accepts sparks agreeably apply mild positive sparks to all the muscular parts of the body, regulating them to comfortable tolerance. Make each sitting from 15 to 20 minutes in length and repeat daily if circumstances will permit until decided improvement is established. Then continue treatment three times a week until benefit ceases.

By reference to the chapter upon the physiological action of static currents it will be observed that it is one of the most effective regulators of functional disturbances that we can prescribe for the nervous system. If the liver performs its work properly and diet and hygiene reinforce the action of the current the mental state will rapidly improve under the above treatment.

TORPID CONDITIONS OF LIVER SPLEEN AND PANCREAS—BILIARY COLIC.

Faradic—For patients who have a special desire for treatment by other remedies than drugs the following method may be employed.

Connect a rectal electrode to the negative pole of an induction coil apparatus and insert it into the rectum. Select a metallic electrode with a small oval end and wrap about it a pledget of absorbent cotton moistened in hot water. For this purpose a mono-polar vaginal electrode answers very well. Connect this electrode with the positive pole and press it deeply between the abdominal muscles during expiration to reach as nearly as possible the site of the gall bladder.

Switch the 500-yard, No. 32, coil,

rapid vibrator and three or four cells into circuit. Increase the current strength from zero through the rheostat until full tolerance is reached. After about 10 minutes reduce the current sufficient to avoid discomfort and produce a few single impulse contractions by moving the switch-arm which controls the cells in and out of circuit. Repeat once a day or every second day according to the results produced.

Very few ordinary patients out of a hundred would care to test the above treatment, and the average practitioner would scarcely think of suggesting it to the majority of his office patients. A perfectly practical treatment, however, which can be employed in all cases which require more than medical prescribing, is the following:

Static.—Prescribe as usual whatever remedies are believed best indicated, and in addition seat the patient upon the static platform connected with the negative pole. Ground the positive pole and the brass point electrode. After explaining the nature of the static spark or otherwise preparing the mind of the patient for the application so that he or she will not be suddenly startled apply a few mild positive sparks to the spine, particularly the lumbar centres and also to the region of the liver and large intestines. As the patient becomes accustomed by one or two repetitions of the treatment to stronger sparks complete the sitting by effective counter-irritation (friction sparks) up and down the spine, over the right side and across the abdomen. See chapter upon special therapeutic effects for directions to produce various degrees of counter irritation, which is one of the most valuable of the therapeutic resources of static electricity. The character of counter-irritation produced by this high potential electric current far exceeds in value the surface counter-irritations of iodine and other drugs.

Under this method of treatment the patient will rapidly improve, will experience decided benefits to general health, and in the course of a few weeks will usually cease to require drug laxatives for a considerable time to come. When nature again becomes torpid the same treatment can be repeated.

VASO-MOTOR, OR FORCES OF THE CIRCULATION.

The following experiments by Drs. Bowditch and Minot illustrate the influence of anesthetics on vaso-motor centres.

Anesthetics, in producing insensibility to have accomplished such results by antagonizing the effects of irritation of sensitive nerves. One of the most constant physiological results of irritation of a sensitive nerve is a rise of arterial tension, due to a reflex stimulation through the vaso-motor centres of the mascular walls of the smaller arteries, especially those of the intestines. It is ascertained that in the majority of cases the rise of blood tension consequent upon the irritation of the saphenous nerves is less marked when the animal is under the influence of ether than when the anesthetic is not used. The first object was to determine the effects of anesthesia on the reflex rise of the blood tension. This was accomplished in the following manner: An animal being placed on the operating table, in the supine position, a solution of curara was injected into the jugular vein, when paralysis ensued. When the respiratory movement ceased, the trachea connected by means of a glass canula, inserted into it with the apparatus for artificial respiration, was so adjusted as to imitate as closely as possible the normal respiratory rhythm. A canula was then placed in the carotid artery and connected with a mercury manometer, carrying a pen by means of which the blood tension was recorded on a long strip of paper, which was kept in uniform motion by clockwork. The saphenous nerve was then placed upon electrodes. The irritation of the nerve was produced by closing the currents by means of a key provided with a pen, thus recording the blood tension, which could be seen at a glance. After the anesthetic had been administered the nerve was again irritated. Then the blood tension was notably de-

creased, and so continued to be as long as these experiments were tried. But far more constant and obvious were the results obtained from chloroform. Here the irritation of the saphenous nerve caused a less marked rise in the blood tension and sometimes there was no rise whatever. These facts present to my mind the clearest evidence in favor of the electrical remedy in cases of deep chloroform toxemia, and the propriety of having accessibility to a Faradic instrument, complete and ready for immediate use, in chloroform administrations.

E. Dubois Reymond first succeeded in demonstrating the presence of specific muscle and nerve currents by deflection of the magnetic needle. He likewise ascertained that, if the muscle or nerve be excited by electric currents or by mechanical or chemical irritants, so that the first is physiologically active, and the latter caused to contract, and then placed at two symmetrical points in connection with the galvano-multiplier, a less deflection of the needle is produced than when the nerve or muscle is in a quiescent state. This is called the negative variation of the current. The conclusion arrived at by Dr. Dubois Reymond was that nerve and muscle contain innumerable positive and negative electric molecules, which move with great regularity throughout the tissue. Perchance the power of electricity in cases of suspended animation is to restore the suspended electrical forces of the body to a normal condition, and thus reanimate failing vitality.

The effect of chloroform may be remedied in much the same way; that is to say, by appealing to the vaso-motor centres through the pneumogastric axis.

No nervous centre can act of its own motion or originate action. It must be excited to action. We might as well speak of sight without the action of the waves of the luminous ether, or sound without the vibration of sonorous substances. In investigation medicine has called to her aid other physical sciences. Natural philosophy has furnished the explanation of the mechanical contrivances, and we look to mechanics, hydraulics and pneumatics to aid us to interpret the phenomena of locomotion, circulation and respiration. It has furnished in electricity the probable means of interpretation of the force which operates the mechanism, the phenomena of nerve power; she has furnished the microscope to enable us to see things invisible to the naked sight, whilst chemistry has laid before us the knowledge of the fluids of the body, and enabled us to solve the mysteries of digestion. These sciences have been called the handmaids of medicine; they are, in fact, parts of the whole; without them no physiology; without physiology no art of medicine.

But with scalpel, microscope and chemistry we fail to delineate the anatomy of the nervous system. It is a truth that that which is is but the sequence of that which was. The results of to-day could not be had without the investigations of yesterday. In like manner will the knowledge of to-day be the basis of the conclusions of to-morrow—such is the law of intellectual development; such is the sequence of scientific advancement. Sir Charles Bell first showed that the nerves of the human organization are distributed with regularity. It is the basis of the physiology of the nervous system. He first called attention to the functions of the spinal nerves, pointed out their different structures, and their different functions; distinguished the sensory and the motor. Marshall Hall succeeded Bell, and we had his excito-motor system. Others succeeded Hall to explain nervous phenomena, among whom stands pre-eminent the great Claude Bernard.

But we owe more to Marshall Hall than the explanations he has given of nervous phenomena. He demonstrated that when the scalpel and microscope fail to determine its antomy we can yet map out the anatomy of the system. A physiological fact is as certain an indication of nervous distribution as though we could follow its ramifications, scalpel in hand, or microscope to eye. Observation and experiment is the thread which leads out of the labyrinth, without which we must

be lost in its intricate masses. Marshall Hall has given us a map of the excito-motor system of nerves. Bernard has shown their peripheral distribution. The functions of the brain and spinal marrow are to be laid before us by perusing the same line of investigation. By experiment, the number of devoted investigators give an earnest promise that the science of life may yet be illustrated, that the opprobium that medicine is only an empiricism may be expunged, and that the day will yet arrive when medicine will be practiced upon laws or principles known and recognized.

The whole forms a beautiful piece of mechanism, whereby under the orders of certain nerve centres it is set in motion. Blood flows in by the arteries regulated by the vasomotors; the veins receive it, and dilate under the direction of the vasodilators; the muscular bands are brought into play by the nerve power conveyed to them, the result being what we call full nutrition. When nerve power is exhausted, or its exaltation diminishes, muscles relax, veins contract, the parts are freed from blood.

As a typical illustration of involuntary force we will cite its influence on the heart's action—say for seventy years—and, for convenience, fix the pulsations at sixty per minute. Then we will have the proposition of sixty multiplied by sixty equals 3600 beats per hour. Again 3600 multiplied by ten equals 36,000 beats in ten hours; or, in the words of the learned Draper, this little organ can execute "three thousand million beats without a stop and propel a half million tons of blood, and momentarily wasting, repairs its own waste all this time.

The mathematical rhythm of four moving cavities, the perfect closure of its mitral and semi-lunar valves, and the regurgitating play of its tricuspid have never failed. Much more could be said of other vital organs under the control of the involuntary force. In the face of all these facts how strikingly true is the saying, "How fearfully and wonderfully we are made," for, in regard to the heart, we have but to note that its nerve supply springs principally from three little ganglia, and a few nerve fibres originating from the brain, spinal cord and sympathetic.

How delicate the source, how fragile and thread-like the conductors; how readily implicated; how sudden and certain the result. Yet, in death from such a cause how obscure the character of the lesion:

"There is a divinity that shapes our
end,
Rough hew them as we may,
A law; a Law-Giver; our Father.
Amen."
"See through this air, this ocean and
this earth,
All matter quick and bursting into
birth,
Above, how high, progressive life
may go,
Around, how wide, how deep extend
below.
"Vast chain of being, which from
God began,
Nature ethereal, human, angel, man,
Beast, bird, fish, insect, which no eye
can see,
No glass can reach, from Infinite to
Thee."

Clinical Medicine.

In charge of Dr. J. J. Morrissey.

THE HISTORY OF A VALVULAR CICATRIX.

J. J. MORRISSEY, A. M., M. D., Ph. D.,
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The treatment of heart lesions has been revolutionized within the past decade of years. Before that period the existence of a heart murmur was sufficient to call forth from the watchful physician every means which therapeutics placed in his hands. A more accurate knowledge of the anatomical relations existing between different portions of the cardiac apparatus, as well as a proper realization of physiological considerations, has gradually led us to the belief that a valvular lesion per se is not the pathological factor it was at one time considered. More enlightened views now prevail, and we have finally come to the conclusion that every patient afflicted with a valvular lesion is not doomed to an early death. A man may be engaged in any of the active occupations of life thoroughly unconscious, so far as the subjective symptoms are concerned, of the presence of an ancient endocarditis, and he may attain a ripe old age without any deficient power or lack of strength on the part of the heart disclosing itself.

As we have so strenuously insisted in the pages of this magazine in writing of other diseases, so do we now reiterate, for it cannot be too often repeated, that every individual is a law unto himself in the proper estimation of the consequences of cardiac lesions. The patient's physical construction, his personal peculiarities, his habits, his occupation and environment, these are among the many factors which should enter into our prognosis. Many a man has had his whole life embittered and his value to the community contracted by being told of the existence of "heart disease" without proper supplementary explanation.

To the French authors in particular we are chiefly indebted for the increased knowledge and proper appreciation of the scope and danger of the consequences of valvular lesion which we now possess.

They divide the history of a cardiac valvular lesion into four stages: (1) We find the heart not at all affected in its force and strength by the presence of the valvular cicatrix. Objectively a soft, blowing murmur may manifest itself, say at the apex, without the slightest untoward symptom. The heart's action is normal, the pulse regular, with no undue arterial tension. No interference is demanded or warranted on the part of the physician, yet it is generally in this stage that the unscientific physician, with his meddlesome therapeutics, does much irreparable injury. A murmur is present, therefore he gives digitalis, and the very condition he strives to prevent is what he induces. It is not too strong an assertion to make that digitalis has done more harm in the hands of some physicians than it has effected good with others. And the use of this sovereign drug has been

again and again condemned because ignorant practitioners have used it illegimately.

In the first stage, called by the French the stage of eusystole, drugs are positively harmful. (2) When the imperfection of the valve advances further, and the labor of the heart is correspondingly increased, compensatory changes, first of a slight character, and only discernible by the practiced ear, demonstrate themselves, and arterial tension is raised. The hypertrophy —a conservative process—may be maintained in its original condition for years, if all other sources of irritation aside from the imperfection of the valve be removed. It is in this stage of hypersystole that judicious advice may be given, and if strictly followed as to diet, the removal of all sources of cardiac poisons, tea, coffee, tobacco, the ingestion of large quantities of beer or alcohol of any description, in a word, the maintenance of the individual's physical and mental processes at the highest normal point, we can watch with equanimity the hypertrophy, recognizing that the powers of the individual will not be irretrievably damaged by the cardiac difficulty. In this condition also drugs are absolutely uncalled for. The careful physician soon concludes that scientific diet is far better than unscientific medication, and this is more particularly applicable to the adoption and use of a dietary that will not leave an enormous amount of waste ash, for if the latter is not quickly eliminated from the system a high condition of functional activity of the kidneys supervenes, and reacting upon the general circulation, detrimentaly affects the heart, quickly producing a condition which all our efforts should be concentrated on preventing, namely the period of (3) hyposystole.

Here the cardiac muscle begins to soften, the heart dilates, the arterial tension falls, odema, congestion and dyspnea appear. The contrast between the two conditions is at once apparent. To maintain the hypertrophy drugs, with, perhaps, the single exception of iron, are contraindicated, but certain conditions must prevail as mentioned above: (1) The muscular tissue of the heart must be healthy, (2) it must receive sufficient arterial blood, (3) the waste products must be rapidly removed from the system, (4) the nerves of the heart must be in a normal state. In other words, the heart, as an organ, should be preserved in the highest condition of nutritional activity. But unfortunately it is in the condition of dilatation that we are most frequently summoned, very often to find it combined with advanced Bright's disease.

In dilatation we have primary and secondary causes: (1) Impaired nutrition with extreme anemia, (2) the excessive use of the articles which were condemned above, namely, tea, coffee, tobacco, alcohol, and to which might be added extreme venery. The secondary causes have no direct bearing upon the subject in hand, but among them may be enumerated insufficiency of the aortic and mitral valves, obstruction to the aortic circulation, atheromatous changes in the coronary arteries, arterial sclerosis, and the numerous sequelae of renal inadequacy. But of this group of diseases which have the heart for their seat and the arteries for their origin it is not now our intention to speak.

To return to the period of hyposystole, this is the condition in which digitalis, judiciously used, has a most beneficial effect. It makes the heart beat slower, it prolongs the diastole, it strengthens the systole and diminishes the irregularity. We do not intend to enter upon the treatment of cardiac affections in this paper, as we shall deal more at length with that topic on some future occasion, but will merely add that rest of body and mind is of prime importance in the consequences of valvular affections of the heart. As the condition of dilatation, with its numerous sequelae, advances a period is reached when the myocardium becomes gradually weaker, undergoing fatty degeneration and not responding to any marked extent to the action of digitalis. To this condition the name amyocardie has been given by Huchard. Herein treatment is of

little avail, and caffein generally takes the place of digitalis.

This then is the history of a valvular cicatrix and its consequences, and from what has been written it is plainly evident that it is practically only in the third period, that of hypo-systole, where drugs avail much. In the other conditions the maintenance of the conservative processes which aid and abet the heart in its physiological battle is to be strongly advocated.

Current Medical Literature.

SMALL POX AND VACCINATION

At a meeting of the Royal Statistical Society, held on the 15th instant, at the Royal United Service Institution, Mr. A. Milnes, M. A., read a paper on "Statistics of Small Pox and Vaccination, with special reference to Age-Incidence, Sex-Incidence, and Sanitation." Mr. Milnes cited the statistics of vaccination and small pox from 1872 onwards to show that the greatest decline in small pox had been coincident with the greatest amount of refusal to comply with the vaccination acts; and incidental allusion was made to the striking increase of medical postponements of vaccination, as showing that even medical men are less willing than they used to be to vaccinate any child under any conditions. By comparison of the history of other diseases, both epidemic and endemic, it was shown that these others have, without vaccination, diminished as fast, and as far as small pox has done with it. And, moreover, as the proportion of vaccinated persons had increased in the population as a whole, so also the proportion of vaccinated patients had increased in the small pox hospitals. Not the most stringent re-vaccination can protect armies from small pox, our troops in India experiencing a proportion of deaths total small pox cases double as high as that of unvaccinated Leicester in the recent outbreak there. Comparison by localities went to show that the highest development to which compulsion can force the vaccination of a community, will never really protect that community from devastating epidemics of small pox. Hence there was no one now to be found to deny that small pox attacks the vaccinated; but this admission was the diametrical contradiction of the promises that passed the law. On the question of age-incidence, Mr. Milnes devoted much care to the development of the argument that sanitary measures were capable not only of reducing greatly the general mortality of an epidemic disease; but of still more largely reducing the children's share of such portion of it as remained. As to sex-incidence, it was shown that inasmuch as primary vaccination applies to both sexes alike, and re-vaccination in great preponderance to the young adult male, we ought to find small pox, whilst equally incident on both sexes of children, attacking in adult life a great preponderance of females. The facts, however, were the other way. The children, it was true, suffered both sexes about alike; but among adults the mortality of small pox fell almost twice as heavily on the males.

—Med. Times and Hospital Gazette.

A MISNOMER.

Is there a typho-malarial fever? Yes, in the brains of the doctors, but not in the bodies of the patients. There is no combined hybrid disease, and it is only due to Woodward to say that he did not recognize a hybrid disease. Typho-malaria is a villainous name and should be banished from our vocabularies, and no doctor should ever use it, particularly to his patients. It gives a man a wrong sense of security, and the doctor wastes a lot of good medicine, a lot of quinine, for instance, because he thinks there is some symptom that points to malaria. I am happy to say that cases of typho-malaria are disappearing slowly from the health reports; they ought to be banished entirely. Chills, as I told you, occur frequently at the outset of a disease, and they may occur throughout the course of a typhoid fever. The State boards of health hereafter should return to every physician who sends in a diagnosis of typho-malaria his blank and ask for something better. It is too late in the day, gentlemen, to make that diagnosis.

—Dr. William Osler, in Maryland Medical Journal.

ON THE TREATMENT OF CATARRHAL DISEASES IN ST. ELIZABETH'S HOSPITAL, VIENNA, WITH GUAIACOL CARBONATE (DUOTAL).

By DR. NIED, Physician in Chief. (Allegemeine Wiener Medizinische Zeitung, June 1, 1897).

In his article on "The Creosote Treatment in Childhood" (Wiener Medizen Blatter, 1896, No. 49) Dr. Hock emphasizes the value of creosotal not only in cases of pronounced pulmonary disease, "but also in the treatment of the catarrhs that are so frequently left behind by whooping cough and measles, and which are well known as the prodromate or predisposing causes of tubercular infection. Treatment with the ordinary expectorants, as is usually recommended, is here entirely useless. Besides the hydriatic treatment it is only from that with creosote that we may expect favorable results." Creosotal is especially useful in the treatment of these cases, and Dr. Hock is in the habit of employing the following formula:

Creosotal.....3-5.0 (3-4 to 1 1-4 dr.)
Ol. Morrhuae.....100.0 (3 1-3 oz.)
Saccharini.....0.05 (3-4 gr.)

To older children who do not want to take cod liver oil the creosotal was given in alcoholic solution and in drops, or emulsified by drops in sugar water."

The dosage in children less than one year old was 0.15 (2 1-4 grains), gradually increasing to 0.5 (7 1-2 grains), or from a teaspoonful of 3 per cent. creosotal cod liver oil to two teaspoonfuls of a 5 per cent. solution. Older children took from 0.5 (7 1-2 grains) to 1.5 (22 1-2 grains) daily.

The great prevalence of catarrhal troubles during the last winter gave me an excellent opportunity to experiment upon adults with guaiacol carbonate, which has an analogous action to that of creosote carbonate.*

In the period extending from January 17 to February 12 I treated 12 female patients of ages between 23 and 75 years, who were suffering from acute bronchitis, complicated in some cases with influenza, with guaiacol carbonate. In accordance with the severity of the attack the following doses were employed:

First day, morning and evening, 0.5 gm. (7 1-2 grains) of guaiacol carbonate.

Second and succeeding days, 1 gm. (15 grains) twice daily; or, first and second days, mornings and evenings, 1 gm. (15 grains).

Third and succeeding days, 1.5 gm. (22 1-2 grains) twice daily; or, first day, 1 gm. (15 grains) twice.

Second day, 1.5 gm. (22 1-2 grains) twice.

Third and succeeding days, 2 gm. (30 grains) twice a day.

*As is well known, guaiacol is the chief constituent of creosote. The value of a specimen of creosote depends upon the amount of guaiacol that it contains. Creosotal is a creosote that, by reason of its combination with carbonic acid, is transformed into a neutral, non-poisonous, non-caustic body, without the loss of any of its therapeutic properties. Guaiacol Carbonate is guaiacol combined with carbonic acid in the same way.

The effect of the remedy was usually apparent upon the second day, and latest upon the fourth. It showed itself by a reappearance of the appetite and a loosening of the mucus in the tubes. The expectoration ceased in from 14 to 20 days. In from two to three weeks the patients were discharged cured. The following condensed histories will illustrate my assertions:

1.—Katharina Oetl, 67 years old, fell sick on January 17, with acute bronchitis. On the first day the patient was given, morning and evening, 0.5 gm. (7 1-2 grains) of guaiacol carbonate; on the second day 1 gm. (15 grains), and on the third day 1.5 gm. (22 1-2 grains). Increase of appetite and expectoration soon set in, and on February 3 she was discharged cured.

2. Theresa Crisch, 26 years old, suffering from Acute bronchitis, which begun on January 18. For the first three days she was given 1.0 gm. (15 grains) night and morning; on the following days 1.5 gm. (22 1-2 grains) twice a day. On the second day of the treatment an increase of appetite was noted, the expectoration, which was at first very slight, became greatly increased by the fourth day, so that by February 7 she could be discharged cured.

3.—Maria Stoiber, 23 years old, was attacked on January 19 with an acute bronchitis (influenza). On the first day she received 1 gm. (15 grains); on the second day 1.5 gm. (22 1-2 grains), and on the remaining days 2 gm. (30 grains) of the guaiacol carbonate. The appetite began to reappear upon the third day only, but it rapidly improved. The mucus secretion was large from the very beginning of the treatment. On February 10 she was discharged cured.

Besides these I treated six nuns, two of whom were aged respectively 79 and 81 years, for acute bronchitis. I gave them 1 gm. (15 grains) of guaiacol carbonate twice daily for three weeks. Appetite and expectoration reappeared upon the third day, and all the patients got well.

These very favorable results should encourage us to further trial of guaiacol carbonate in acute bronchitis and other catarrhal diseases.

FOREIGN EXCHANGE

By Dr. A. S. Davidson.

THE MIXINFECTION IN PULMONARY TUBERCULOSIS.

J. A. SCHABAD.

Russkiji Archiv Patalogii Klinitcheskoi Medecini i Bacteriologii, Vol. II, Parts 5 and 6.

From the voluminous monograph we can abstract only a few results. In all 31 cases of pulmonary phthisis were examined. The sputum was examined in every case at different periods from one to four times, utilizing Kilzato's method of washing out the sputum. Mostly he found one or two kinds of micro-organisms, rarely three and five kinds. As to frequency, the micro-organisms were found as follows:

Mucous membrane streptococci in 19 cases 29 times.

Streptococci in 12 cases 13 times.

Pneumococci Frankel-Wechselbaum in 12 cases 10 times.

Staphylococcus yellow, in 7 cases 12 times.

Staphylococcus white, in one case one time.

Pneumobacilli Friedlender in four cases four times.

Proteus vulgaris in three cases three times.

Bacillus influenza in two cases three times.

Bacillus coli commune in two cases three times.

M. tetragenus in two cases two times.

Diplococcus intracell Weichselbaum in two cases two times.

Bact. pyoflour, Ledderhose, in one case one time.

Bact. pyocyan, Ledderhose, in one case one time.

Coccus albus liquefac. Besser in one case one time.

The blood was examined in seven cases during the life of the patients. In one case only author found the staphylococcus alba in the blood extracted from a vein by means of a syringe. Of the 31 cases 21 ended fatally. In 17 cases post mortem sections were made, and only in one case were strange microbes obtained from microscopical and by culture media. In one case author obtained from the lung tissue and from a caverne inoculation of M. tetragenus. The same was found near the tubercle bacilli in the olveoli exudate. In the remaining cases author found the streptococci pyogenus, as well as other kinds—the pneumobacillus of Friedlander, the pneumococcus of Frankel, the bact. coli commune, etc. In the post-mortem examination of the blood the pyogenus streptococcus was mostly found. In the histological examination the streptococcus was mostly found, aside from the tubercle bacilli. In the alveoli exudate the tubercle bacilli were in small numbers, and in those cases where the streptococci were also found, the latter largely prevailed.

Author, basing on these observations, concludes that nearly all cases of pulmonary tuberculosis which come to the dissecting table consist of mixinfection, the principal activity of which is due to the streptococcus pyogenus. The M. teteragenus the author also ascribes a pathogenic action as well as an initiator to a chronic catharoal pneumonia. As a mixinfection of pulmonary tuberculosis author considers those cases in which different microbes can be found in the lung tissue, in the capillaries or in the blood. The finding of pathogenic micro-organisms in the sputa after the method of Kilsato is not sufficient to diagnose as mixinfection, since experience teaches that not all microbes obtained in this manner come from the lungs. The only exception is that of the staphylococcus-pyogenus. It is important, according to author, to distinguish the streptococcus pyogenus from the so-called mucous membrane streptococcus. The latter equals the first morphologically, differentiates itself, however, in biologic peculiarities and principally that it is not pathogenic, while the mucous membrane streptococcus is absolutely uninjurious. The streptococcus is of great diagnostic value. Its presence proves the existence of a streptococci mixinfection. The secondary infection caused by the M. tetragenus is less rare than the pneumococci. Secondary infection generally sets in in the last stadium of pulmonary tuberculosis and leads rapidly to the fatal end. The microbes which add in the secondary infection participate simultaneously with the tubercle bacilli in the secondary pneumatic process. Even if they do not aid in the formation of the exudate they act through their toxins on the general condition of the patient, on the fever, and, as the author convinced himself, take an active part in the destruction of the lung tissue and the formation of cavities. Yet there are cases which rapidly develop to the hectic state, ending fatally and not depending on any mixed infection. In mixinfection with streptococci, the fever is generally remittent, but constant. Absolutely normal temperature in mixinfection does not occur.

BACTERIOLOGICAL EXAMINATION OF THE BLOOD.

HANS KOHN.

Deut. Med. Woch., Feb. 25, 1897.

Author gives his researches upon this subject and especially in cases of acute pneumonia. He employed Sittmon's method, in which, with all the usual precautions, 5cc. of blood

is obtained with a sterilized needle from the veins of the arm, 1cc. of blood is mixed with nutrient agar previously made fluid, and the whole poured out into a dish. In cases of general sepsis due to malignant endocarditis the streptococcum in numerous colonies was obtained in one case along with a few colonies of the staphylococcus, but in a second case the staphylococcus alone was found. In three cases of of subacute and chronic endocarditis the results were negative, except in one case, where there was a thrombophlebitis, and here six staphylococcus colonies developed on two plates. In one case of erysipelas, in one of phlegmon, in on of icterus with enlarged spleen, in one of paroxysmal hemoglobinuria and in one case of aphious stomatitis with severe intestinal symptoms the results were negative. In eight cases of enteric fever a bacillus was found in two cases, but it could not be proved to be the typhoid bacillus. In one case of chronic leucaemia and one of pseudo leucaemia the results were negative. In one case of pyaemia with joint manifestations the streptococcus was found, but in two cases of acute rheumatism the results were negative. In 18 out of 32 cases of acute pneumonia no colonies developed, and all these patients recovered. In seven cases the pneumococcus was found, and all these cases were fatal. In three other cases positive results were obtained, but these patients recovered. Three further cases proved fatal, but no micro-organisms developed from the blood. Twice were the results again negative, but death was here due to a staphylococcus empyema. In one of these fatal cases without micro-organisms, the patient was an old man and a drunkard, in another influenza bacilli were found in the lung, and in the third there was nothing especial to note. Thus in by far the greatest number of cases which recovered the cultivation experiments were negative, whereas in the large majority of fatal cases the pneumococcus was found in the blood. The colonies varied from 10 to 200. The positive results were obtained 24 to 48 hours before death. The presence of pneumococcus in the blood is, therefore, of unfavorable import, and these results confirm those observed by other observers. Thus in a certain number of cases of pneumonia the severity of the disease is due to a complicating sepsis, namely a pneumococcus sepsis. To the other possible causes of death sepsis must be added. It is possible that the cardiac failure is due to the action of toxins, which may even act more powerfuily when the microorganisms are present in the blood. Until a specific (bacteriological) treatment is discovered, efforts must be made to get rid of the micro-organisms from the blood by diuresis. etc. The administration of large quantities of fluid may, however, further embarrass an already overburdened tract.

THE MOTOR FUNCTION OF THE STOMACH.

GOLDSCHMIDT.
Munch. Med. Woch., March 30, 1897.

Author describes a method of estimating the motor functions. Leube and others recommended emptying the stomach at stated times after a test meal to find out whether the contents had disappeared. Klemperer's oil method is open to many objections. The salol test, even as modified by Huber, is not altogether satisfactory. These methods are not adapted for ascertaining the amount of the stomach contents in the various stages of digestion. It is impossible to empty the stomach completely with the tube. It was sought to estimate the remainder by introducing a solution of hydrochloric acid of known strength, so calculating the fluid remaining in the stomach by the dilution the acid solution underwent. Grape sugar has also been used for the same purpose as being more easy of determination. Another method consists in introducing 100cc. of distilled water and comparing the specific gravity of the fluid drawn off with that of the stomach contents first obtained. The author has investigated this subject in a patient with a gastric fistula. After expressing the stomach contents he introduced 50cc. of distilled water and again expresses.

Both specimens are filtered. As many c. cm. of distilled water are added as will produce the specific gravity of the second filtrate. The number of c. cm. added will represent the amount of fluid left in the stomach after the first expression. The temperature of both fluids must be the same. The author's investigations have shown this procedure to be accurate, and it is very simple.

NEW EDITION OF THE BABYLONIAN TALMUD, ENGLISH TRANSLATION, ORIGINAL TEXT TRANSLATED, FORMULATED AND PUNCTUATED BY MICHAEL R. RODKINSON.

Revised and corrected by the Rev. Dr. Isaac M. Wise, president Hebrew Union College, Cincinnati, O. Vol I, Tract Sabbath; Vol. II, Section Moed (Festivals) Tract Sabbath; Vol. IV, Section Moed (Festivals) Tract Schekolim and Rosh Hashana. Hebrew and English.

We had the pleasure of receiving the above volumes, which, however, is not our domain to review. We are safe in saying that those able and in position to do so will accord it its due merit. We are, however, waiting for the tract at Nide, which, from a medical point of view, will be of great interest.

The undertaking is certainly a gigantic one, since it comprises the science and literature of a nation during a period of 1000 years. We congratulate Mr. Rodkinson and hope for a realization of this great work. A. D. D.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

TETANUS CURED BY INJECTION OF CARBOLIC ACID.

Poli (Gazz. degli Osped., March 14, 1897) reports the case of a boy, aged 16, who was kicked on the foot by a horse. Five days later symptoms of tetanus set in. The wound had been dressed with a bit of rag, a leaf and waxplaster. On admission (September 28) the wounded part was excised and thoroughly cleansed with carbolic and iodoform. Bromide and chloral given internally, and injection of 1 per cent. carbolic solution given every two hours. Nicolaier's bacillus was found in the excised tissue September 30 and the patient could open his mouth a little and the face was less contracted. October 2 trismus and opisthotonos still well marked. October 4, temperature normal, but tetanic symptoms as before. The carbolic injections were now given every hour. On October 16 the patient was practically well, but the injections were continued every two hours up to October 28. Although this case at first sight seems to support the equine theory of tetanus, further examination convinced the author that, on the contrary, it really supported the telluric theory. Other cases where carbolic injections had been successful in tetanus are referred to, and although nearly 500 injections were given in this case no bad results were noticed.

CAESAREAN SECTION FOR CANCER OF THE UTERUS.

Robert Sorel (Arch. Provinc. de Chirurgie, May, 1897) thinks that although the range of usefulness of Caesarean section has recently been

limited by the introduction of symphysiotomy, etc., it still finds a clear indication when cancer of the uterus has rendered cervical dilatation impossible. The case reported was one in which pregnancy had arrived at the full term. The cancer was not one that could be operated upon. Labor had been going on for sixty hours without a trace of dilatation. Caesarean section was performed, and the infant was saved alive. The patient is still living, but the cancer is making steady, although slow, progress. Had Sorel seen the case in early pregnancy he would have counseled removal of the whole uterus; as it was, Caesarean section was preferable to total abdominal hysterctomy as being more rapid and less dangerous, and because the malignant disease had already invaded the vagina.

OPERATION FOR APPENDICITIS IN AN INFANT AGED FOUR.

F. Villard (Journ. de Clin. et de Therap., infant, April 22, 1897) reports a case of appendicitis in an infant scarcely four years of age. There was a history of habitual constipation. About two days previous the child began to complain of pain in the right side of the abdomen, and this steadily increased, being worst at night. There was a swelling in the right iliac fossa and pain on pressure. Micturition was normal, but there was complete constipation. There had been some vomiting, and the temperature was above the normal. An incision was made above Poupart's ligament. It was noted that the cellular tissue was oedematous, and on cutting through the muscular layers a large abscess cavity with some fecal contents were opened into. The pus was evacuated, and an unsuccessful attempt made to find the appendix. A further attempt revealed it lying behind the cecum and perforated at its base. It was easily removed, and was found to contain a small mass of hardened feces. Villard is of opinion that one should operate between the second and third day in such cases if the symptoms do not ameliorate. One should not temporize, although the condition may atempt one to do so.

THE SURGICAL TREATMENT OF PERFORATIVE PERITONITIS IN TYPHOID FEVER.

Monod and Vanverts (Rev. de Chir., March, 1897), after a careful study of published statistics have formed the following conclusions with regard to the operative treatment of perforating typhoid ulcer: 1. The results of surgical intervention in cases of diffused peritonitis consequent on intestinal perforations of typhoid fever are not very encouraging; 2. as, however, this lesion, if left to itself, is almost certainly fatal (95 per cent. of fatal cases), it is justifiable to resort to an intervention the general results of which (88 per cent. of mortality) are better than those of expectation; 3. the prospects of operative treatment are les unfavorable when the perforation has occurred at a late stage of typhoid fever, and particularly during convalescence or at the end of a relapse. The surgeon, however, may act at any period of the fever at which the perforation is produced, provided, there is no distinct contraindications presented by the general conditions of the patient; 4. the operation should be performed with the least possible delay, a condition of success which may be taken advantage of as an immediate diagnosis of perforation is possible in most cases; 5. the results of surgical intervention, and more particularly of suturing, are excellent with regard to occlusion of the perforation, but, on the other hand, are unfortunately less favorable with regard to the survival of the patient; 6. the causes of the almost constant failures are multiple, the most frequent being persistence of the intensely septic peritonitis, occurrence of fresh perforations, and extreme exhaustion of the patient; 7. this last condition should in certain cases constitute a contraindication to surgical treatment. If, in fact, the patient seem too exhausted or collapsed to be capable of bearing an operation it would be well to

abstain; 8. surgical intervention would in most cases consist in median laparotomy and simple suture of the perforation. Intestinal resection and the formation of an unnatural anus would be reserved for cases in which the lesions are more or less complicated; free irrigation and drainage would complete the operation; 9. in a case of encysted peritonitis, the frequency and severity of which lesion are less considerable, the surgeon should restrict his intervention to simple incision over the seat of the disease, in order to effect evacuation of the pyo-stercoral accumulation. It might under such circumstances be possible to recognize the perforation, and to close it by suture.

—The British Medical Journal.

THE SILVER TREATMENT OF WOUNDS.

By HOFRATH DR. CREDE,
Divisionsarzt a la Suite, Chief of the Surgical Division of the Carola Hospital in Dresden.

1. PRELIMINARY REMARKS.

The silver treatment of wounds is based upon the well known facts that silver and its salts possess pre-eminent antiseptic properties, and that they are at the same time entirely non-poisonous to the human organism. In my essay entitled, "Silver and the Silver Salts as Antiseptics," Leipzig, F. C. W. Vogel, June, 1896, I have given the reasons for their bactericide action; have detailed the properties of the various argentic salts; and have described their application to surgical diseases and the healing process that takes place under their use. I refer the reader to this publication for particulars. My experiences since that time with 1500 more patients confirm every assertion that I have made, and I feel that I am now in a position to elaborate the method, and to formulate it as a definite system of treatment. The outlines of this system I propose to sketch in the following lines. It goes, of course, without saying that each case must be treated according to its individual requirements, and that in each specialty certain modifications will be found necessary. Elsewhere I shall consider the subject of the various infectious diseases in which, to my mind, silver has undoubted and important effects. My method of the silver treatment of wounds is applicable in war and in times of peace; to hospital as well as to private practice; in every part of the body, and to every kind of wound. By it the best imaginable results can be obtained, and, finally, its execution is very simple, cheap and economical in the expenditure of time and strength.

2. MATERIALS EMPLOYED IN THE SILVER TREATMENT OF WOUNDS.

1. Citrate of Silver, chemically pure (Arg. citr. puriss.), a white, stable, odorless, non-irritating powder, soluble in the proportion of 1-3800 parts of water. This is the chief antiseptic for wounds; for, the smallest quantity of it dusted upon a lesion keeps it permanently sterile. In solution of 1 to 4-8000 it is employed for the irrigation of the cavities of the body.

2. Lactate of Silver, chemically pure (Arg. lact. puriss), a white, permanent powder, soluble 1 part in 15 of water. In the solid form it is somewhat irritating, and it is most useful for the preparation of disinfectant solutions of the strength of 1 to 100-2000, and for the preparation of silver sutures and drains.

In the fluids of the animal body both salts show a greater antiseptic power than does the sublimate, without having its disadvantages. Watery solutions are best made twice as strong as those of sublimate to have about the same effect.

3. Tablets of Citrate of Silver of 0.1 grm. (1 1-2 grains), for the convenient preparation of solutions for irrigation, injections and gargles.

4. Tablets of the Lactate of Silver, each 0.2 grm. (3 grains) to be used instead of sublimate tablets.

All these four preparations are made by the "Chemische Fabrik von Heyden," Radebeul, near Dresden.

5. Silver Gauze, a muslin evenly, powerfully and permanently impregnated with metallic silver; it develops its antiseptic properties wherever the tissue fluids form acids, which unite with the silver to form the antiseptic salts. This occurs, for

instance, during the life action of the schizomycetes, and continues as long as any silver is present. It is not necessary to use it in wounds that have been dusted with the citrate of silver; ordinary sterilized gauze is sufficient here. In cases where this has not been done, it forms an unchangeable and ever-clean dressing, which in itself disinfects smaller wounds, and keeps non-infected larger ones sterile. It is especially valuable for use outside the larger hospital centres, and is prepared by Max Arnold in Chemnitz.

6. Citrate of Silver Bougies, prepared from pure cocoa butter and containing 2 per cent. of the citrate. They are valuable for the disinfection of deep fistulas, the urethra, the bladder, the uterus, etc.

7. Silver Silk, Silver Catgut and Silver Drainage Tubes. These can be prepared by the physician himself or by any manufacturer of surgical dressings. The raw material, without any special preparation, is put in a wide-mouthed, brown-colored glass bottle containing a 1 per cent. solution of the lactate of silver. Silk should remain immersed therein fourteen days, catgut and drains eight days; then the material should be taken out, thoroughly rinsed in ordinary water until the latter remains clear, and then exposed to daylight until it becomes blackish brown in color. It is to be preserved well wrapped in several thicknesses of gauze, and immediately before it is used it should be laid for a few minutes in boiled water and rinsed therein. Silk and catgut can be appropriately kept in alcohol. The silver that they contain make the ligatures antiseptic of themselves, where that is necessary.

3. DIRECTIONS FOR CLEANSING.
For Physicans and Nurses.

1. Thorough soaping and scrubbing of the hands and forearms, special attention being paid to keeping the nails short and smooth.

2. Rinsing with pure lukewarm water.

3. Washing and brushing the hands and forearms with a solution of the sublimate 1 to 2000, or of the lactate of silver 1 to 1000.

4. After each contact with non-disinfected articles, washing of the hands with soap and rinsing with pure water.

For the portions of the patient's body that have been injured or are the seat of operative procedure:

1. A general bath some time during the twenty-four hours preceding the operation.

2. Soaping and shaving of the field of operation.

3. Rinsing the same with boiled water.

4. Brushing or rubbing the same with ether.

5. Rinsing with boiled water.

6. Brushing or rubbing with sublimate solution 1 to 2000, or lactate of silver solution 1 to 1000.

7. Rinsing with boiled water.

8. Covering the neighborhood of the field of operation with linen cloths which have lain in sublimate water 1 to 2000 for ten minutes immediately before the operation, or which have been boiled.

9. During and after the operation protective cleansing of the field of operation with 1 to 2000 sublimate, or 1 to 1000 lactate of silver solution.

10. Cavities are to be irrigated with 1 to 500-2000 lactate of silver, or 1 to 4000 citrate of silver solution.

4. TREATMENT OF WOUNDS.
Operative Wounds.

After the cleansing of the field the operation is performed, and several times if it is particularly bloody or dirty, and in every case at its conclusion, a gentle rinsing with 1 to 2000 sublimate or 1 to 2000-5000 solution of the lactate or the citrate of silver is done. The sublimate solution is most convenient in places, as in hospitals, where an antiseptic solution is frequently used, and a stable fluid must be kept on hand. The silver salts decompose under the influence of light, and must always be prepared fresh; with the help of the tablets this can very readily be done. After haemostasis the wound should be lightly dusted with the powdered citrate of silver; even the omentum stands this very well. The wound is then dressed with gauze, or silver gauze and cotton, and bandaged somewhat tightly. The dress-

ings remain in place as a rule for eight to ten days. They do not require to be renewed when serum trickles through them, but they should be covered with new dressings for appearance sake. Contact of the secretion with the air does no harm. When inflammatory processes are present it is proper to use a wet dressing for the first two or three days after the insufflation of the citrate of silver, and then to apply a dry one. On changing the dressings ordinary cleanliness only is usually required.

INJURIES.

Attended with Hemorrhage.

When possible the patient should be first bathed; when this is not practicable the neighborhood of the wound should be cleansed according to the above rules. No minute examination of the wound should be undertaken; only portions of tissue that are almost entirely detached should be cut away; and nothing should be removed from the surface of the wound even if it is dirty. Incisions are to be made only when there is very great undermining. Sutures are not to be applied, or used only for the purpose of maintaining the parts in opposition. After hemostasis is effected the powdered citrate of silver is thinly dusted over the wound. If the parts have been badly contused, or if inflammation has already set in, a water dressing is applied; in other cases the dressing should be dry, as for operative wounds. Care must be taken to secure a quiet and firm position for the affected part. The wound and its immediate neighborhood soon become aseptic, as is seen from the purely serous secretion that appears; and they remain so, for the citrate of silver infiltrates the neighboring tissues and sterilizes, without in any way irritating them. Local abscesses may be caused at a distance from the wound by disease organisms; they must be treated in the usual way. Plastic and other preparations are as a rule done secondarily.

5. TREATMENT OF ULCERS, ABSCESSES, FISTULAE, SUPPURATING CAVITIES, INFLAMED MUCOSAE, ETC.

The affected area must be cleansed as with wounds. Ulcerated surfaces clean up under dusings of the citrate of silver and wet or dry dressings in a few days. Abscesses that have been opened, and suppurating cavities are first irrigated with 1 to 1000-5000 lactate or citrate of silver solutions, and then packed with silver gauze. The deeper layers are to be removed only when granulations have appeared. The mucous membranes bear the silver solutions very well indeed, as also do the serous membranes of the abdominal and the thoracic cavities. The citrate and lactate solutions have at least the same antiseptic value as those of the nitrate of silver, but are not irritating like the latter. Bougies of the citrate of silver may be introduced one to three times a week in chronic fistulae and in cavities and sinuses that are difficult of access. Wet applications of the citrate of silver solution, 1 to 4000, to inflamed parts, more especially in inflammations of the eyelids, have all the efficacy of an active but non-irritating antiseptic. At every change of dressing the neighborhood of the wound is to be thoroughly cleansed by means of baths and rinsings with water or with benzine.

A little practice will enable us to entirely avoid the only disadvantage of the silver treatment, the light brown discolorations of the linen that it occasions. When such do occur they can readily be removed by immersion for two or three minutes in a solution composed of sublimate 10.0 grm. (2 1-2 drachms) and ordinary salt 25.0 grm. (1 oz.) to 2000 grm. (2 quarts), of water, followed by a vigorous rinsing.

Therapeutical Progress.

STUDY OF THE AMERICAN MEDICINAL FLORA.

The sub-commission of the Pan-American Medical Congress appointed to study the medical plants of the United States has entered into an association with the Smithsonian Institution for that purpose. The attention of our readers is called to the respective circulars issued by these organizations, which we print below.

Smithsonian Institution, Washington, D. C. May 28, 1897.

Dear Sir—The Smithsonian Institution has undertaken to bring together all possible material bearing on the medicinal uses of plants in the United States. Arrangements have been made with a body representing the Pan-American Medical Congress, the sub-commission on medical flora of the United States, to elaborate a report on this subject, and the material when received will be turned over to them for investigation.

The accompanying detailed instructions relative to specimens and notes have been prepared by the sub-commission.

All packages and correspondence should be addressed to the Smithsonian Institution, Washington, D. C., and marked on the outside, "Medical Plants for the United States National Museum.

Franks which will carry specimens, when of suitable size, together with descriptions and notes, free of postage through the mails, will be forwarded upon application. Should an object be too large for transmission by mail the sender is requested, before shipping it, to notify the Institution, in order that a proper authorization for its shipment may be made out. Respectfully,

(Signed) S. P. LANGLEY,
Secretary.

INSTRUCTIONS RELATIVE TO MEDICINAL PLANTS.

The Pan-American Medical Congress, at its meeting, held in the City of Mexico, in November, 1896, took steps to institute a systematic study of the American medicinal flora, through the medium of a general commission and of special sub-commissions, the latter to be organized in the several countries. The sub-commission for the United States has been formed and consists of Dr. Valery Havard, U. S. A., chairman; Mr. Frederick V. Coville, botanist of the U. S. Department of Agriculture; Dr. C. F. Millspaugh, curator of the Botanical Department of the Field Columbian Museum, Chicago; Dr. Charles Mohr, State Botanist of Alabama; Dr. W. P. Wilson, director of the Philadelphia Commercial Museums, and Professor H. H. Rusby, of the New York College of Pharmacy. This sub-commission solicits information concerning the medicinal plants of the United States from everyone in a position to accord it. The principal points of study are as follows:

1. Local names.

2. Local uses, together with historical facts.

3. Geographical distribution and degree of abundance in the wild state.

2. Is the plant collected for market, and if so,

(a) At about what season of the year?

(b) To how great an extent?

(c) How prepared for market?

(d) What is the effect of such collection upon the wild supply?
(e) What price does it bring?
(f) Is the industry profitable?

5. Is the plant, or has it ever been, cultivated, and if so give all information on the subject, particularly as to whether such supplies are of superior quality, and whether the industry has not proved profitable.

6. If not cultivated present facts concerning the life history of the plant which might aid in determining methods of cultivation.

7. Is the drug subjected to substitution or adulteration? and if so give information as to the plants used for this purpose.

While it is not expected that many persons will be able to contribute information on all these points concerning any plant, it is hoped that a large number of persons will be willing to communicate such partial knowledge as they possess.

It is not the important or standard drugs alone concerning which information is sought. The sub-commission desires to compile a complete list of the plants which have been used medicinally, however trivial such use may be. It also desires to collect all obtainable information, historical, scientific and economic, concerning our native and naturalized plants of this class, and to that end invites the co-operation of all persons interested. Poisonous plants of all kinds come within the scope of our inquiry, whether producing dangerous symptoms in man or simply skin inflammation, or, as "loco-weeds," deleterious to horses, cattle and sheep. In this respect the general reputation of a plant is not so much desired as the particulars of cases of poisoning actually seen or heard from reliable observers. It is believed that much interesting knowledge can be obtained from Indians, Mexicans and half-breeds, and that, consequently, Indian agencies and reservations are particularly favorable fields for our investigation. Such knowledge will be most acceptable when based upon known facts or experiments.

In order to assist in the study of the habits, properties and uses of medicinal plants, the sub-commission undertakes to furnish the name of any plant specimen received, together with any desired information available.

Owing to the diversity in the common names of many plants it will be necessary for reports, when not furnished by botanists or others qualified to state the botanical names with certainty, to accompany the same with some specimen of the plant sufficient for its identification. While the sub-commission will endeavor to determine the plant from any portion of it which may be sent, it should be appreciated that the labor of identification is very greatly decreased and its usefulness increased, by the possession of complete material; that is, leaf, flower and fruit, and in the case of small plants the underground portion also. It is best to dry such specimens thoroughly in a flat condition under pressure before mailing. While any convenient means for accomplishing this result may be employed, the following procedure is recommended: Select a flowering or fruiting branch, as the case may be, which when pressed shall not exceed 16 inches in length by 10 inches in width. If the plant be an herb two or three feet high it may be doubled to bring it within these measurements. If it possess root leaves some of these should be included. Lay the specimen flat in a fold of newspaper and place this in a pile of newspapers, carpet felting or some other form of paper which readily absorbs moisture and place the pile in a dry place under a pressure of about 20 to 30 pounds, sufficient to keep the leaves from wrinkling as they dry. If a number of specimens are pressed at the same time each is to be separated from the others by three or four folded newspapers or an equivalent in other kinds of paper. In 12 to 24 hours these papers will be found saturated with the absorbed moisture, and the fold containing the specimen should be transferred to dry ones. This change should be repeated for from two to five days according to the state of the weather, the place where the drying is done, the fleshiness of the specimens, etc.

The best way to secure the required pressure is by means of a pair of strong straps, though weights will do. The best place for drying is beside a hot kitchen range. When dry the specimens should be mailed between cardboards or some other light but stiff materials which will not bend in transit.

It is a most important matter that the name and address of the sender should be attached to the package and that the specimens, if more than one, should be numbered, the sender retaining also specimens bearing the same number, to facilitate any correspondence which may follow. The sub-commission requests that, so far as practicable, all plants sent be represented by at least four specimens.

(Signed) H. H. RUSBY, M. D.,
Chairman of the General Commission, New York College of Pharmacy.
VALERY HAVARD, M. D.,
Chairman of the Sub-Commission, Fourt Slocum, David's Island, New York.

OPIUM IN GRAVE DISEASE.

Mr. Greig Smith, in a paper on the "Pre-Diagnostic Treatment of Grave Abdominal Disease" (Treatment, March 25, 1897) urges the desirability of avoiding the use of opium in these cases. He does not mention purgatives, but he advises the avoidance of iced fruits on the ground that by their administration the intestines may be "started into furious action." A course of treatment is sought for "which will certainly do no harm, but will probably do good, and which will not obscure the signs and symptoms, but will rather help in their evolution and interpretation." Assuming that a patient has symptoms coming on suddenly which may be due to simple colic or to "some grave condition such as obstruction or perforation of a viscus, or even extravasation of blood," he advises as the first thing to be done the administration of brandy in milk by the rectum, and that the patient should then be swathed in hot blankets. "The attendant now sits down by the bedside of the patient to watch him and complete the diagnosis. And he ought scarcely to leave his side till the diagnosis is complete." Mr. Greig Smith goes on to say that the patient with the colic makes a great fuss about his condition, whereas the subject of grave disease makes little fuss and keeps his abdomen as still as possible. If the intestines are in motion Mr. Greig Smith considers that there is no perforation, because this condition causes paralysis and silence on auscultation, except at the seat of rupture, where there are "rare and mysterious blowing or rushing sounds." He then briefly refers to the signs of gaseous exudation into the peritoneal cavity. If the surgeon notes and keeps in mind every individual sign as it is evolved, Mr. Greig Smith says, "it will be surprising if at the end of half an hour their aggregation do not permit of a diagnosis being made sufficiently accurate for exact treatment," and if it be decided that the condition is due to colic he advises that the treatment should commence with a full dose of morphia. But here we get beyond the pre-diagnostic stage.

—Practioner.

The Times and Register.

VOL. XXXIV. No. 3. PHILADELPHIA AND BOSTON, AUGUST 7, 1897. WHOLE No. 943.

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Original

SOME CLINICAL FEATURES OF MEASLES.

BY FRANK S. PARSONS, M. D., BOSTON, MASS.

So common a disease as measles does not worry the average parent except when some complication intervenes or there is doubt as to the early diagnosis. It is therefore quite common for physicians to be called but once or twice to these cases, and the ability to watch them closely in private practice is thus lost. To be sure there is little to do by way of medication in the uncomplicated disease, as these cases tend to recovery, and those that are in any way alarming in the symptoms depend on the constitution of the patient or some cachexy.

Probably no disease of childhood exists of which there are more old-fashioned whims and granny notions prevalent in the minds of the laity than measles, and I am quite positive that upon no exanthematous malady is the time honored saffron tea more lavishly bestowed. For three long, tedious days does the little sufferer endure the hot draught of that herbaceous mixture until, in the due course of events, "the measles have been driven out." How long we shall have to contend with the mythology of degenerate, bygone days is still an open question.

The incubative stage of measles is between 10 and 14 days, during a part of which time the patient does not seem well, but no particular trouble is manifest. Apparently he has "taken cold." There may be some slight cough, but generally a feeling of malaise is all that is complained of. After a time, however, there is a sharp rise in temperature, often accompanied by a convulsion in children under 2 years, or by vomiting in older children. There is also exacerbation of the cough,

which is now dry and harsh. The temperature varies in different children and different epidemics, but ranges between 101 and 103 degrees Fahr. Higher temperatures than these may be recorded, but are not so constant as in scarletina. At this period if the throat be inspected there will be presented small spots of a bronze hue similar to those which appear on the skin later in the disease. This fairly marks the beginning of the initial or first stage of measles.

After this sudden outburst of symptoms there is a stage of rest for two or three days. The fever abates nearly to normal, and the child plays about as usual. The cough keeps up an irritating hacking, however, and the throat still shows signs of affection. There is more or less swelling of the tonsils, but nothing like the angina of scarletina. About the close of the third day from the initial seizure minute spots appear along the forehead, or back of the ear, or on the cheek of the patient. These spots are somewhat elevated macules, and as they become thicker they coalesce to form crescentic patches with lines of normal skin between. The eruption rapidly extends downward over the surface of the body, so that by the end of the fourth day or beginning of the fifth it has thoroughly covered the person. Four days are the usual number during which the eruption is at its height, and after which it begins to fade in the order of its appearance. Desquamation takes place in the form of furaceous scales.

This foregoing resume of the ordinary case of measles is vivid in the mind of every physician, but personal experience differs in the observation of individual exceptions.

During a recent epidemic in Boston I was called to see a young lady of 19, suffering from fever, which was about the only symptom noted by the casual observer. She was of very light complexion, had a temperature of 103 F., no cough, no eruption observable to the eye, but a roughness of the surface of the skin, had conjunctivitis and a characteristic measle throat, i. e., the inside of the throat was studded with minute dots such as are observed in ordinary cases. This patient had been ill for about a week prior to my first visit, had been dosed with the usual saffron tea in the hopes of bringing out the eruption, but all to no purpose. Subsequently another member of the same family came down with a severe case of measles confirming the diagnosis. Evidently this came as near being a case of morbilli sine exanthemate as could be well described, and yet, strange to state, this patient on recovering desquamated in a most approved and characteristic style.

During this epidemic I met with a complication of which little is said in the books and practically nothing as to its treatment. I refer to incessant vomiting during the eruptive stage. The cases under my observation in which this complication occurred were all children between 7 and 12 years of age, and all girls. I am inclined to view the phenomenon as more of a symptom than a complication; a symptom of excessive eruption probably on the lining coat of the stomach, for it must be remembered that the eruption of most of these exanthemata attacks the mucous membrane of all organs as well as the skin. In one case vomiting was so excessive as to bring quantities of blood from the stomach, and yet recovery took place. The vomiting occurred during the height of the eruption in all the cases, and subsided on the day the rash began to fade. Medication only relieved the trouble for a time, when it would reappear. Medication could only be directed toward relieving the irritation, and consisted mainly of ice, cocaine in pill form and counter irritation over the epigastrium.

One of the most dangerous complications with measles which one meets is pneumonia. This may occur at the onset of the disease and be ushered in with a convulsion, at which time it is more apt to take the form of lobar pneumonia, or it may occur during the later stages of measles about the time the eruption begins to fade, at which time it is inclined to take the lobular variety or the form of broncho-pneumonia.

Pneumonia with measles offers no

symptoms that are not observed in simple pneumonias, but the prognosis is more grave. If of the catarrhal variety, from an extension of bronchitis, which always goes with measles, dyspnea is often extreme. Lobar pneumonia in the young infant, coexisting with measles, is extremely apt to prove fatal.

About the time the eruption is fading there is usually more or less diarrhea. The discharged matter consists of desquamated epithelium and refuse from digestion. Occasionally when unusually irritating substances have been allowed in the diet enteritis may be set up, or a chronic diarrheal condition from ulceration of the mucous coat of the intestine.

There seems to be some beneficial action in darkness on the progress of the eruption. I am not prepared to state the reason for this, but in my personal observation there has appeared to be a more free rash when the patient has been confined to a dark room than when he has not.

Treatment.—The ordinary uncomplicated case of measles needs no treatment other than a mild antipyretic and diuretic. For the former I am in the habit of prescribing the following:

R—Acetanilid .....dr. i
Fiat. in chartulas numero xxx.
Sig.—One powder every four hours.

This gives but a small dose of the remedy, but one which I have found to fulfill every need in ordinary types of mild fever, sweating usually taking place in a few minutes (about 15). It is a free action of the skin which encourages the eruption in its due period of time. The time-honored saffron has no specific action in hastening the appearance of the rash. More good is accomplished in this respect by the hot water of the saffron tea. Neither is there any need of hastening the appearance of the eruption, for it will not in the natural course of events mature before the end of the third day, and often it is a day later. The so-called "striking in" of the eruption, which is rarely seen, but sometimes imagined, is due not to a freak of the rash, but the onset of a complication, which should be sought out and treated intelligently.

The cough in measles is often exceedingly annoying and hard to relieve, the reason for which is plain. The cough is harsh from the irritation of the throat due to the eruption more often than to the coexisting bronchitis; indeed, sometimes we cannot observe the usual rales of bronchitis where the cough is incessant, harsh and wearing on the patient. Such coughs as these are best treated with demulcient drinks, especially hot milk and small doses of paregoric. If stomatitis also exists the chlorate of potassium may be given.

There is quite as much need of attention to the free action of the kidneys in measles as in scarlet fever. This is well accomplished by the employment of the acetate or citrate of potash. I prefer the latter.

Where there is much bronchitis it is also well to loosen the secretions by the exhibition of ipecacuanha in some form. In short the treatment of the cough, the kidneys and the bronchitis may be combined under the following prescription:

R—Vini ipecac .....dr. i
Potass. citratis .....dr. iii
Tinct. opii camph.....dr. i
Syrupi aurantii .....oz. ii
Aquae .....q. s. ad. oz. iv
M. Sig.—A teaspoonful every hour for a child 2 years old.

Complications of measles require such treatment as the individual case demands. Pneumonia is best treated with mild counter irritation or poulticing and digitalis. Tonics are often required during convalescence in strumous children. A favorite one of my own is the following:

R—Ferri pyrophos.....dr. ss
Tinct. gentianae comp.....dr. ii
Elixir cinchonae.....q. s. ad. oz. iv
M. Sig.—A teaspoonful in a little water before meals to a child 4 years old.

Cathartic medication is to be avoided in view of the tendency to diarrhea, but in the early stages much relief from constipation will be obtained if a single seidlitz powder (blue and white papers) is dissolved in half a pint of water, the fermentation allowed to settle, and a tablespoonful given to the patient every 15 minutes until an action of the bowels is obtained.

—367 Adams st., Dorchester, Boston, Mass.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

TUMOR-LIKE MASSES NEAR THE SURFACE.

Great difficulty is sometimes encountered when we attempt to draw the line between irregular adventitious or transient swellings and true neoplastic productions. This is particularly obvious in non-inflammatory, serous, purulent, sanguinous or gaseous distentions over local areas.

They are most commonly detected in the vaginal outlet of the pelvis, over the inguinal areas or broad, osseous surfaces.

In the cold abscess of tubercular ostitis, or arthritis, the secretions may follow a sinuous course a long distance from the primary source of disease, to become arrested, located and walled in by a thick, pyogenic membrane.

This may present many features of a genuine new growth, and few probably there are who have not sometime been both disappointed and humiliated by finding the supposed "tumor" dissolve out of sight when the membrane was incised and the imprisoned material gushed out.

To mistake deep fluid accumulations for new growths is by no means uncommon. The inexperienced in a doubtful case may look for the leading clinical manifestations of abscess formation, as chill, pain, rise of temperature or some positive disturbance of the general health. But there has been none. No pronounced, acute, sensible, local or general disturbance. In many of these, in consequence of the extreme tension of the investing structures, fluctuation may be entirely absent; the mass has a hard feel, but may play loosely in its bed in different directions. In other rare cases deep-seated suppuration may curiously mimic malignancy. An example of this came under my care about a year ago in a widow of 35 years. She gave a history of trouble in her left breast, lancinating pains extending into the armpit, shoulder and forearm. She had a pale color, with the characteristic melancholic expression of cancer. She had visited one of our large medical institutions, where she was advised that her malady was serious and the entire breast must be amputated.

As she had matrimonial aspirations and dreaded the though of having to part with her breast she sought further advice. By a critical examination into the history, present and antecedent, and a most painstaking exploration of the seat of trouble, I was satisfied that the lesion was benign. This conclusion was arrived at, although there was the characteristic depression of the nipple and marked enlargement of the deep axillary chain of absorbents. In order to remove all doubt a long, strong exploratory needle was introduced deeply. This revealed the nature of the lesion, which was simply purulent.

A free incision, curetting and draining ended the "cancer." She has since married and has had no further trouble.

A young man came under my care for multiple tumors over the left scapular region; one, the largest, extending into the axillary space.

The young fellow, though anemic and rather emaciated, had no pulmonary evidence of tubercle. Joint action was good, and he only came to me to have these masses treated because they were augmenting in volume and were becoming painful. Their general features rather indicated lipomata, although we seldom meet with these except in vigorous subjects.

On operating it was found that each mass was nothing more than a collection of thick inspissated pus, undergoing cheezy and calcareous changes. They were cold abscesses, each one with a long, tortous sinus, leading far inward toward the capsule of the humero-scapular articulation. The operative incisions continued to discharge a degenerate pus, and some months later he sank from general tuberculosis.

Some time ago, among other interesting cases which I was requested to examine in the wards of my good friend, Dr. Isaac N. Quimby, of Jersey City, was a young man with a dubious swelling in the right groin. It presented the quadruple characters of inguinocele, movable, peritoneal abscess and neoplasm, or a hernia. Its history rather suggested some kind of inflammatory elements, but the abscess of local heat, a fluctuation with its indurated character and ready reducibility, pointed rather to a tumor or hernia.

In order to elucidate the puzzle presented in diagnosis in this remarkable case I was permitted to make a dissection into the mass, when it turned out to be a dermoid undergoing central suppurative changes.

In my service in the Ninety-ninth Street Hospital the case of a young woman came with a large cervical tumor, which seemed to rise out of the thorax in the anterior medistinal space. It came up in close contact with the trachea on the left side. This it displaced somewhat and impeded respiration. She stated that it came on suddenly in labor two months before; at one time would greatly augment in volume and then again would undergo marked diminution.

As the surface areas over the swelling were markedly sensitive, and as she was highly hysterical, anything like a complete examination was impossible without an anesthetic.

It was observed, in the second stage of anesthesia—ether—that the mass greatly enlarged, and with the palm of the hand lying over it a distinct impulse was felt simultaneously with such expiration. It was now quite evident that we had a tracheocele to deal with. Through violent expulsive efforts of parturition it was evident that a rupture of the treachea had occurred.

On division of the tissues over the greatest prominence of the mass a hollow cavity was exposed. Through this a faint hissing sound could be heard as the gases passed up the trachea. The walls of the cavity were lined with a creamy exudate. With a curette this was cleared away, when the hiatus was tamponed with iodoform gauze. Healing was rather slow, but finally complete.

All of the above unusual tumor-like cases derive their special interest from the diagnostic standpoint. One may well be guarded and reserved in expressing an opinion on their character or probable progress.

In fact, a precise knowledge of them is quite impossible without an exploratory incision or puncture. Under proper precautions these procedures are justifiable in all peripheral masses, although always, unless there are special reasons for withholding them, one should be ready to proceed with operative measures for relief or cure.

It should be remembered that there are tumors and tumors, and that not an insignificant number of local enlargements are no tumors at all in the strict pathological sense, as we will learn when the mor-

phology of true neoplasms is taken up. In closing this chapter the writer would impress on especially the young practitioners the importance of the diagnostic element in oncology; for, though operative skill is indispensable to the surgeon, precision in the differentiation of new formations stands well in the fore rank with it.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN ORTHOPEDIC SURGERY—MEETING OF MAY 21, 1897.

DISLOCATION OF THE PERONEUS LONGUS AND PERONEUS BREVIS.

Dr. W. R. Townsend presented a young man of 20 years of age whose peroneal tendons were easily dislocated to the front of the malleolus. The right foot had been affected in this way for many years, the left only for the past seven months. On walking and on rising from a chair the tendons would slip over the malleolus and cause considerable disability till they were replaced by the hand. The boy did not have much pain, but he was easily fatigued. Dr. Townsend had hastily reviewed the literature on the subject. Dr. L. A. Sayre reported a case in 1870. In 1876 Dr. Beach, of Boston, reported 18 cases, including one of his own. Gillett de Grandcourt reported ten cases in 1878. Treves said it was caused by sudden and violent contraction of the muscles when the limb is in such a position as to favor displacement and that it may be treated by pads and pressure, and that in some cases it was advisable to replace the tendons and retain them by suturing the torn edges of the sheath.

Dr. R. Whitman suggested deepening the channel, replacing the tendons in the groove in the bone and giving them a new covering of periosteum or fibrous tissue. This might be possible without removing the sheath.

Dr. A. B. Judson said that the peronei were comparatively small and unimportant muscles. To a slight degree they assisted the muscles of the calf to extend the foot on the leg. Aside from this their function was to evert the sole of the foot and this function was not seriously impaired by displacement of the tendons to the front of the malleolus. He thought that the patient would get no benefit from an operation, and that practically no treatment was needed.

Dr. Whitman said that the discomfort caused by the slipping of the tendons must be considerable and that the boy would be better off if this could be stopped.

Dr. Townsend said that the patient had recognized the disability and had come on account of it, and he did not think it was fair to tell him that we could do nothing for him without trying. He thought an attempt should be made to prevent the slipping of the tendons by the application of pads and pressure before an operation was decided on.

A CASE OF TRAUMATIC SPINE WITH RECTAL AND VESICAL PARALYSIS.

Dr. J. P. Fiske presented a patient, a man 33 years of age, who had been under treatment for 14 months, and under observation 34 months, from the time of the injury. When first seen he was in a condition of complete helplessness. He could not move in bed, and if turned or moved by his attendants he suffered the greatest pain. Urine was constantly flowing and he was not conscious of the passage of feces. Recovery had been complete with control of

the sphincters. He was now walking without assistance and had returned to his work. The accident had been attended with great violence. While working as a harness maker the boards gave way under him as he was carrying a heavy load, and his right leg went through a hole in the floor. The spine was forcibly flexed and he became unconscious. The twentieth day after the injury rigidity of the spine and muscular spasm were marked. There were complete paralysis from the waist down as regards voluntary motion, incontinence of urine and feces, and pain in the dorso-lumbar region, aggravated by the slightest motion. Crepitus and spinal deformity were absent. The diagnosis was severe traumatism of the spine, concussion of the cord, more or less complete rupture of the ligaments and possibly partial dislocation of one of the lumbar vertebrae, with spontaneous reduction. He was at once encased in plaster of Paris from the axilae down to and including the pelvis, with immediate considerable relief. The plaster jacket was renewed when necessary and was worn day and night for ten months. This treatment, with massage, frequent change of position, alcohol baths and such medication as was required by his poor general condition and the vesical symptoms, was attended by gradual recovery. There were no bed sores. At the end of four months he sat up in bed and was lifted into a steamer chair. In seven months he had regained control of his rectum and could walk a short distance with crutches. From this time his recovery was more rapid. The incontinence of urine persisted longer than the other symptoms, but ceased after a time, and for the past 12 months he had been a perfectly well man. This case showed clearly the immediate and permanent relief which followed absolute fixation after severe spinal injury. Patients treated without persistent fixation were liable to be constantly troubled with pain in the back and legs and to present the symptoms of railway spine. Dr. Fiske added that these cases were often considered hopeless. He had presented the patient as an example of what continued fixation and supporting treatment would accomplish.

AN ISCHIATIC CRUTCH USED IN PLACE OF AN ARTIFICIAL LIMB.

Dr. A. B. Judson presented a boy 9 years of age, who was wearing an ischiatic crutch instead of axillary crutches or an artificial limb. Amputation had been performed below the knee after a railroad accident. The case illustrated the comfort and ability which this apparatus was able to secure in the treatment of these affections of the lower extremity which require that the weight of the body be removed from the affected limb. This use of the skeleton of the pelvis was not a new thing. Ischiatic support was a feature of Dr. Fayette Taylor's hip-splint described in 1867. In fact the long hip splint was an ischiatic crutch with the added function of traction. In the instrument shown the crutch consisted of an upright steel piece adjustable in length, to meet the growth of the patient, with an India rubber crutch tip at the foot and a semi-circular pelvic band, carrying a single perineal strap. It also had a shoulder strap which transferred the weight of the splint to the opposite shoulder, a steel knee piece, restraining the limb anterio-posteriorly, and a webbing strap above the knee. There was no customary leather strap surrounding the splint and the ankle, because the lower part of the leg was absent. Although the stump was flexed in walking there was no possibility of anchylosis interfering with the subsequent use of an artificial leg, because the knee was free from inflammation, which necessarily preceded anchylosis. The apparatus was easily provided with a joint at the level of the knee, and this was desirable in convalescent hip disease, if the limb was so long as to be inconvenient if constantly extended.

OSTEOTOMY FOR INVERSION IN CLUB FOOT.

Dr. Townsend, at the request of Dr. V. P. Gibney, presented a girl 5 years of age whose feet had been treated by Phelps' operation, by braces and by building up the outer side of her shoes. On February 16,

1897, to correct inversion, subcutaneous osteotomy of both tibiae had been performed, and also right achillotomy. The lower fragments of the tibia were rotated outward and the limbs put in plaster of Paris. The inversion had been entirely corrected. Mr. R. L. Swan, of Dublin, who had described this operation, after an experience in the treatment of 20 patients with good results, had said that rotation of the limb as the result of equinovarus, and which persists after the latter is corrected, is due to trouble below the knee; that when these patients walk and attempt to toe out they throw the entire limb out by rotation of the thigh, and that the gait is awkward. The toeing-in is due to the fact that the entire leg is rotated in and the external malleolus is too far forward. To overcome this he divides the tibiae only, rotating and bringing outward the lower fragment, thus placing the internal malleolus further forward as regards its relation with the external malleolus.

Dr. Judson said that for the prevention of inversion he relied on the thorough correction of the equinovarus. If this was done the child would avoid toeing in, either unconsciously or later from pride.

Dr. Whitman said that division of the bones of the leg was a very old operation for the correction of intoeing of club foot.

Dr. Townsend said that Mr. Swan divided only the tibia and was very careful not to divide the fibula.

Dr. Taylor had noticed that the feet in the case shown had not been fully corrected before the operation. The child walked very well now and the result was very good, but it seemed uncertain that this condition would prove permanent. He believed that the persistence of inversion in many of these patients was due to incomplete correction of the deformity.

CALCANEO-VALGUS WITH SUBLUXATION OF THE ASTRAGALUS.

Dr. Taylor presented a baby affected with congenital calcaneo-valgus, with a very unusual degree of dislocation, or subluxation forward of the astragalus. The heel was unduly prominent. The astragalus was displaced forward, while the fibula was behind its normal position. Treatment had been gradual reduction and plaster of Paris fixation.

COXA VARA.

Dr. Whitman presented a boy 16 years of age affected with bending of the neck of the femur of about 12 months' duration. He walked with a limp and eversion of the foot. The elevation and prominence of the trochanter were increased by flexion. Limitation of abduction, actual shortening of one-half an inch, with marked apparent shortening from habitual adduction were all present. The treatment would be by removing the weight of the body from the weak femur by the use of a perineal crutch, massage, forcible stretching of the adductors and, if necessary, subtrochanteric osteotomy. Bending of the neck of the femur was not due to general rickets or the rickets of adolescence, of which there were cases on record. There was, however, a weakness of adolescence which, under favorable conditions, caused this and similar deformities.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are not furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

THE PROPAGATOR OF PAUPERISM.

In the Forum for June is an article by Dr. George F. Shrady, entitled "The Dispensary a Propagator of Pauperism." The subject is ably treated from every point of view, and some of the facts narrated will come as a revelation to many citizens of New York who interest themselves in social affairs. Dr. Shrady says: "It may be broadly stated, as the result of exhaustive statistical study, that fully 50 per cent. of the patients who apply for free medical aid are totally undeserving of that charity. The main fault lies with the managers. In New York alone there are 116 dispensaries, each one of which is vying with the other in propagating the worst form of pauperism. It would appear that charity is monopolized in the same way as any other marketable commodity that is ruled by money. The millionaire philanthropists stand in the same relation to the medical profession as did the camel to the Arab when his beast asked the privilege of poking his nose into his master's tent; when the camel finally occupied it there was no room for the owner, and he was forced to vacate accordingly. Several striking instances are given in this article illustrating the deceptions to which rich persons will stoop to cheat charity and the medical man. We quote the most barefaced case as told by a dispensary physician: "A wretchedly clad woman presented herself to me at the dispensary and asked for treatment. She gave a name which I afterward found was assumed. She was badly in need of attention and said she could not pay. I believed her and agreed to treat her. It was an interesting case and she consented to appear before the class of 50 or 60 practitioners. One day after she had

been before the class several times and treated I was driving with my wife in Central Park. We were passed by a magnificent team and carriage, spanking horses, nobby coachman and footman and glittering harness. In the carriage was a lady whose features were familiar, but I could not remember where I had seen her. That same day my charity patient presented herself attired as usual in the poorest clothes. I recognized her as the lady of the fine turnout. I said nothing, as I thought I would investigate. A few days later I saw the same carriage in front of a fashionable shop and got a good view of my patient as she alighted. When she next came to the dispensary I asked her for her real name. She gave me her assumed dispensary one. I told her she was deceiving me, and she finally disclosed her identity. She was the wife of a man known all over the city as a millionaire. I sent a bill to her husband and it was paid without a word." The suggestion is made that the control of dispensaries should be vested in a State Board of Charity, which should be granted ample powers to regulate their management, and without doubt at the next session of the Legislature another bill will be introduced.

RESECTION OF THE STERNUM.

Professor W. W. Keen, of the Jefferson Medical College, Philadelphia, has published in the Medical and Surgical Reporter two cases in which the sternum was partially resected on account of tumors. The first patient was a woman 44 years of age, whose left breast, together with several enlarged axillary glands and the fascia over the pectoral muscles, was removed for carcinoma in March, 1892. The muscles themselves did not seem to be involved and were left. The patient made a prompt recovery. In January, 1894, the sternum showed a slight bulging at the junction of the manubrium and gladiolus, and in the following month a small nodule was discovered in the right breast. In March, 1894, the sternal tumor had increased very much in size, and as the sternum, the cartilages of the second and third ribs and the intercostal muscle between them all seemed to be involved, both the cartilages and also the intercostal tissues were removed down to the pleura. The internal mammary artery was divided and secured by a curved needle passing through the thinned wall of the pleural cavity. A considerable portion (about 1 inch by one and one-half inch) of both the manubrium and the gladiolus was then removed by the double rongeur forceps until apparently healthy bone was reached. The right breast was also removed, together with a layer of the pectoral muscle and all of its fascia, and the right axilla was cleaned out. The patient recovered from the operation, but the disease returned, and she died in the following August. The second patient was a woman, 28 years of age, in whom the tumor commenced in the beginning of 1895. In November, 1895, it covered the end of the right clavicle and the upper left portion of the manubrium, and there were two small nodules over the end of the right sterno-mastoid. It was diagnosed as sarcoma. The operation commenced with the removal of the lower third of the sterno-mastoid, together with all the diseased tissues in front of the sternum and clavicle. The inner third of the right clavicle and one inch of the inner end of the first rib were them removed, the manubrium was separ-

ated with the finger from the tissues of the mediastinum and divided just to the left of its right border and horizontally just above the joint between it and the gladiolus. The patient was discharged from hospital in January, 1896. No return has occurred after more than 15 months and her general health is now excellent. Portions of the sternum have frequently been removed for fracture, especially gunshot fracture, but Professor Keen has only been able to collect 17 other cases in which the entire thickness of the bone was resected for tumor, not including superficial resections for such conditions as exostosis.

It is with great regret that we have learned of the deaths recently of two prominent members of the medical profession in New York. Dr. J. Lewis Smith, the well-known authority on diseases of children, died on the 9th of June, and Dr. William Lusk, the professor of midwifery at Bellevue College, on the following Sunday.

We have received the illustrated catalogue of the J. Ellwood Lee Company, Conshohocken, Pa., containing price list of hospital and physicians' supplies, which is very complete. A copy will be mailed physicians free on application to the firm.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

TREATMENT OF NEURITIS.

Little if any distinction appears to be made between neuritis and neuralgia in many of the observations upon the electrical treatment of these conditions. If one is a functional alteration and the other an inflammatory process it is obvious that some difference in the management of treatment is required.

Exact directions for the treatment of a case of neuritis can hardly be stated in advance of seeing the patient for treatment depends upon the condition of the affected part and not upon the name of the disease. In acute neuritis Gray has advised waiting until there is a relative cessation of pain with some improvement in tactile sensation (third or fourth week) and then commencing the experimental use of a mild galvanic current. He says: "I have seen some cases that would be markedly benefited by only from one-half to one milliampere passed through the limb for about a minute, and in which acute pain would be lit up by the passage of two or three mil. for several minutes. My rule is to begin with small doses and to give short sittings while I observe the effect of the current. If the result is to extend the pain I withhold the electrical treatment for two or three weeks more, but if this is not observed I very gradually increase the current so that at the end of a week the patient will be taking one milliampere for a period of three or four minutes. Seldom have I found it necessary to exceed a current of three mil. and a sitting of three minutes until the patient was well on to convalescence.

"In my opinion small electrodes which impinge directly on the nerve are not only unnecessary but harmful. The nerve is often so sensitive that such an application will hurt it, but if you put a broad electrode above the nerve and a large electrode below it and cautiously pass the current you will get the best results. After the treatment has been found to be well borne by the patient one can resort to the use of a very mild faradic current."

Others disagree entirely and believe that they have never seen any benefit result from treating neuritis with galvanism. The pain is relieved for a short ime, but returns with a little greater aggravation and an increase of congestion. On this subject, however, Delamater makes the following remarks: "In my experience where inflammatory products are present we must resort to means other than electricity to bring about absorption. The current, to be sure, may be used as an adjuvant in some of these cases, but great care must be exercised or damage will result. In this class of cases the uninter-

rupted galvanic current should be used. The electrodes should be first firmly placed in such a position as to cause the current to pass through the entire inflamed portion of the nerve trunk and from the peripheral terminal toward the centre. Having done this the current may be turned on very gradually until you reach from 8 to 20 mil.; then allow this current to flow from two to five minutes. Repeat daily. Do not use an interrupted current of any kind on these cases.

In the simple, acute cases without exudation activity always increases blood supply, while inactivity tends to reduce blood supply. Therefore an absolutely essential element in the treatment of nuritis by any means is rest. Were I restricted to one prescription for this disease I would unhesitating select rest.

"The galvano-cautery may be used to advantage in these cases by drawing a cautery pencil very lightly over the cutaneous surface along the course of the affected nerve, making a burn sufficient to produce mild counter-irritation. However, if the inflammation is quite active a blister is better. In this class of cases strap or bandage the limb to prevent muscle action, leave bare a surface above and below the inflamed portion on which to apply electrodes, place the positive pole at the peripheral and the negative at the central end and give a treatment daily. The current should be mild, steady and continuous and the application not over five minutes. The progress is always slow. The daily treatment may be continued for from two to four weeks with lessening frequency for two or three months.

"The case of neuritis that is cured in less than six months is indeed a mild one. Many cases require steady treatment for one or two years. In cases of chronic neuritis after the inflammation has entirely subsided and there still exists malnutrition and either contracted or partly paralyzed muscles, the faradic current should be used for the purpose of stimulating nutrition, restoring natural contractability and overcoming abnormal contractions."

Whenever in the treatment of an inflammatory condition sedation is required we can now obtain it very effectually by means of the rapidly interrupted high tension induction coil current, or what is practically the same current from the small leyden jars. This current produces a much more noticeable effect in the acute stage than does the galvanic current of any amperage. To restore the function of sensory nerves I know of nothing equal to the use of fine needle-like static sparks rapidly showered over the area of anesthesia. Whenever benefit may be derived from counter-irritation I prefer to produce the cunter-irritation by static friction rather than a blister for the cautery. To restore the functions of paralyzed muscles all interrupted currents may be useful to a greater or less degree. When atrophy is marked the interrupted galvanic current is usually the first to employ.

In a descending neuritis affecting the lower extremity the different parts of the limb may require entirely different treatment during the first two months of the disease, and while one part may have passed into the stage when muscular contractions are indicated, another part may be demanding sedation. It is rather curious that so little clinical information appears in text books upon the subject of neuritis and its treatment by electricity. It is probable that in many cases in practice the irregular and often obstinate course of this disease has not been taken into account and physicians have considerad electricity a failure because it has not given satisfactory and permanent relief in a short time. It is also probable that a great many cases have been treated by methods incorrectly employed and by currents of improper character and quality. If in any obstinate case in which plastic exudation has taken place relief is not obtained it may be possible that the nerve is imbedded in the tissues and requires to be released before the curative treatment can take effect. In the treatment of neuritis there is an excellent opportunity for diagnostic skill and electro-therapeutic ingenuity.

Clinical Medicine.

In charge of DR. J. J. MORRISSEY.

EXAMINATION OF THE BLOOD IN PNEUMONIA.

BY J. J. MORRISSEY, M. D.,
New York.

Hans Kohen, the result of whose researches has been published in the Deut. Med. Woch, has been conducting bacteriological examinations of the blood in a number of diseases, and the outcome of his investigations is certainly, particularly with reference to pneumonia, very instructive. He employed Sittman's method in which, with all the usual precautions, 5 c. cm. of blood is obtained with a sterilized syringe from the veins of the arm, 1 c. cm. of blood is mixed with nutrient agar previously made fluid and the whole poured into a dish. The investigations were made in several diseases, but for the sake of brevity we will confine ourselves to pneumonia. In 18 out of 32 cases of acute pneumonia no colonies of streptococci developed, and all these patients recovered. In seven cases the pneumococcus was found, and all these were fatal. In three other cases positive results were obtained, but these patients recovered. Three further cases positive results were obtained, but these patients recovered. Three further cases proved fatal, but no micro-organisms developed from the blood. Twice the results were again negative, but death was due here to a staphylococcus empyema. In one of three fatal cases without micro-organisms the patient was an old man and a drunkard; in another influenza bacilli were found in the lung, and in the third there was nothing special to note. Thus in by far the greatest number of cases which recovered the cultivation experiments were negative, whereas in the large majority of fatal cases the pneumococcus was found in the blood. The colonies varied from two to 200. The positive results were obtained 24 to 49 hours before death. The presence of the pneumococcus in the blood is therefore a sign of unfavorable import, and these results are a confirmation of what has been found by other observers. Thus in a certain number of cases of pneumonia the severity of the disease is due to a complicating sepsis, namely a pneumococcus sepsis. To the other possible causes of death sepsis must be added. It is possible that the cardiac failure is due to the action of toxins which may even act more powerfully when the micro-organisms are present in the blood. Until a specific (bacteriological) treatment is discovered efforts must be made to get rid of the micro-organisms from the blood by diuresis, etc. The administration of large quantities of fluid may however, further embarrass an already overburdened heart.

It may not be a far-fetched conclusion to derive from the preceding that the application of cold baths in pneumonia are a powerful factor in antagonizing the disintegrating effects of excessive hyperpyrexia, in which the micro-organisms appear to more abundantly thrive. We look for almost a stasis of the circulation in the internal organs, and the liver and intestines in particular being greatly impaired in their functions the bacilli pursue their ravages with unexcelled severity. The action of

the cold applications in stimulating the peripheral circulation and relieving the internal congestion, aside from its decided beneficial effect upon the nervous system, may have much to do with dissipating the concentration of the micro-organisms.

A fertile field of great utility is open to the investigating student in the bacteriological examination of the blood independently of what has been accomplished in the past.

A CLINICAL NOTE.

Oxygen has been advocated in the treatment of chlorosis, and apparently with beneficial effects. A vitiated atmosphere certainly will be prejudicial to the otherwise good effects of iron when given in chlorosis, and there is every reason to believe that the assimilation of oxygen by the impoverished tissues should possess remarkable power in toning up the system. As an illustration of the detrimental result of ordinary house gas in opposing the otherwise good effect of Blaud's pill in chlorosis we wish to cite the following case: The patient was a female, 18 years old, domestic, of apparently rugged constitution, who until three months previously had enjoyed excellent health. She had been living in her present place of employment about six months, and during the summer her health was exceptionally good. Occasionally she was troubled with a slight headache on arising, which she attributed to indigestion. She had noticed that with the approach of winter her cephalalgia had become progressively intensified, and there was a marked tendency to vomiting in the morning. During the day the headache diminished considerably, but at all times she was oppressed with a sensation as if there was an iron "hand around the head." She presented every indication of an intensely chlorotic condition, and had the marked circulatory symptoms accompanying that disease. Amenorrhea was present and had declared itself some three months previously. The first suspicion that naturally arose in my mind was that the girl was pregnant, but I soon convinced myself of my error. I treated the case as one of chlorosis pure and simple, and so ordered iron in Blaud's pill, with suitable modifications of the diet, and directions as to exercise. She returned in two weeks, but with no marked signs of improvement, scarcely any in fact that were observable. She was advised to continue the treatment and report in a month. She did so without any improvement in her condition. A short time before I had been called upon to treat a fatal case of gas poisoning, and on closely questioning the girl I found that now and them she detected a slight odor of gas in her room, more marked in the winter months, since at night the windows were closed. I told her to inform her mistress of my suspicions, namely that she was suffering from an insidious form of gas poisoning. She did so, a plumber was sent for, who discovered the leakage. This was rectified. In the course of a few days the headaches disappeared, her system responded to the effects of the iron, rapid improvement followed, menstruation re-established itself and eventually an absolute cure was effected.

It is interesting to note (1) that in summer, when there was free circulation in the chamber night and day, scarcely any perceptible effect arose from the presence of gas, and (2) in the fall and winter, when the bedroom was almost hermetically closed to outside air, the symptoms became more pronounced; (3) when the cause was removed the rapid response to treatment was immediately demonstrated.

In this connection it will be interesting to note the effect of gas of an impure character, and the principal part of the gas used for illuminating purposes can be classed under that head, upon the circulatory system. Pneumonia often follows as a sequence of gas poisoning, not perhaps to the direct effect of the carbon monoxide, but rather to the depressed condition of the cells of the respiratory tract, which permit of feeble resistance to the encroachment of the pneumonic organisms, always more or less present in the human system.

Haldane, whose researches in this line of inquiry have been followed with fruitful results, has shown,

first, that carbon monoxide, apart from its action upon hemoglobin, is a physiologically inert gas, and that the symptoms it gives rise to are not due to any positive action upon the tissues, but simply to its negative action in depriving them of its oxygen (and here we might mention in passing that it was undoubtedly due to this cause that such a marked inhibitory effect was exercised over the combination of iron administered in the case cited above. The iron had no effect in regenerating the modified condition of the corpuscular elements of the blood, and consequently the chlorotic symptoms persisted, despite the administration of 30 grains of Blaud per diem); secondly, that the stability of carboxyphemoglobin is in inverse proportion to the tension of the oxygen in the alveoli. These two propositions being established the whole aspect of these cases is changed; we put a different interpretation upon these symptoms, and we approach their treatment with more confidence and with some pretensions to scientific exactitude.

Further, Haldane has introduced a colorimetric method for estimating the percentage saturation of blood with carbon monoxide, and he has proved by his experiments (3) that symptoms are in direct proportion to the amount of carbon monoxide absorbed by the hemoglobin. This being so, even at the present time, an examination of the blood will enable us to form an opinion as to whether we may expect serious consequences or not, and eventually, after a series of cases has been recorded, it will prove a fairly accurate guide, not only as to the ultimate prognosis, but also as to the sequelae we may anticipate, and as a consequence the treatment we should adopt.

To those who wish to pursue the subject further we recommend the British Medical Journal, Oct. 3, 1896, to which we are indebted for many of the observations made above.

1. Journal of Physiology, Vol. xviii, p. 450.
2. Journal of Physiology, Vol. xviii, p. 462.
3. Journal of Physiology, Vol. xviii.

Current Medical Literature.

CHRONIC GASTRITIS.

Professor H. T. Webster, M. D., of San Francisco, in a recent publication, discusses chronic gastritis and its treatment. After a careful resume of the etiology and pathology of the affection, and an enumeration of the symptoms attending it, he says, in speaking of the diagnosis:

"The use of the stomach-tube will afford the best means of diagnosis. If siphonage be practiced an hour or so after eating, hydrochloric acid will usually be absent, and lactic acid, associated with fatty acids, are present with a large quantity of mucus. If siphonage he practiced seven hours after eating, undigested food will be found still remaining in the stomach, while in cases of functional dyspepsia it will have disappeared. Malignant disease will be excluded by lack of cachexia, absence of perceptible tumor upon palpation, and by the character of the material vomited, coffee ground material soon appearing in cancer. In gastric ulcer, a diagnostic feature is frequent hematemesis."

He believes that if a proper diet be pursued and rational medicinal treatment be employed, almost every case of chronic gastritis will improve readily, unless it be complicated by gastric carcinoma, gastric ulcer, or hepatic, renal, or pulmonary disease. His treatment consists in lavage, disinfection and cleansing of the viscus with hydrozone. Lavage should be practiced every morning before eating, a small quantity of water (a pint) being used at first, which should be increased to two or three quarts as the treatment is carried on. The water should be warm (98.6 degrees F.) and solutions containing Glauber's salt, asepsin or boracic acid are often useful. Regarding the use of hydrozone in this affection, he says:

"The introduction of hydrozone as a remedy in this condition was an innovation of remarkable value. A drachm of Marchand's hydrozone, added to four ounces of boiled water, and drunk while the stomach is empty, exerts a powerful influence in dissolving and removing the tenacious mucus, destroying microbic elements of fermentation and stimulating normal action in the diseased mucous surface. The best results follow its use in the morning before breakfast, the patient taking it while in bed, and remaining on the left side for ten minutes before rising. It may be taken oftener, but once a day may suffice, and it is advantageously used in this manner after the practice of lavage.

The hydrozone may at first produce acrid sensations in the stomach, but as the irritated gastric surface improves in tone under its influence this will pass away and sensitiveness to its action will subside. Where necessary the amount of hydrozone may be reduced until the stomach becomes more tolerant to it.

The important step in chronic gastric catarrh, as in catarrh of all other mucous cavities, is the cleansing of the part from the ropy mucus, which clogs the glandular organs and serves as a nidus for the operation of agents of fermentation. Glycozone in teaspoonful doses, diluted with water, administered after meals, prevents fermentation of food and accelerates a cure.

If the treatment outlined above be properly carried out, the writer believes that little more is necessary, for, with the removal of morbid accumulations, the gastric secretions will become normal in quantity and quality. Hydrochloric acid, administered internally, may in some cases do good, as also the bitter tonics, but their place is secondary to the use of the stomach tube and the disinfection of the mucous membrane of the stomach with hydrozone.

—New England Medical Monthly.

A FURTHER COMMUNICATION CONCERNING EUCAINE B.

BY DR. P. SILEX,
Lecturer and First Assistant at the University Ophthalmological Clinic at Berlin.
(From the University Clinic and Polyclinic for Diseases of the Eye, Berlin.)

The number of the favorable reports upon Eucaine A during the last few months have been very great. Disadvantageous features have rarely been noticed. Amongst the latest laudatory reports we may mention those of Vollert (1), Best (2) and Winterfeld (3); and they, perhaps, would not have appeared if these investigators had not used such concentrated solutions of the drug. It is possible also that the purity of the Eucaine A may not have been above cavil. I believe this latter to be the case for the following reasons:

Dr. Vinci entered the polyclinic of Geheimrath, Professor Schweigger, about a year ago, and, with his permission, entered, in conjunction with myself, upon the investigations, which included observations upon eyes affected with the most varied diseases. My independent investigations enabled me to inform him that Eucaine A was very useful and fully equal to cocaine. A solution that I received from elsewhere later, and which was labeled "Eucaine A," I was compelled to reject, for it caused severe pain in the lids and great reddening of the conjunctiva. This fact is mentioned in my article (4). I am somewhat at odds with Dr. Vinci as to the explanation of the phenomena observed with him.

The same care and zeal was observed in both sets of cases and the clinical material was not different, and I therefore conclude that the solutions of Eucaine A were not alike, that one of them was, perhaps, not free from acids or other impurities. Dr. Vinci is certainly right when he reports that the results obtained at the clinic were good ones. And I do not attempt to deny the occurrence of the unpleasant phenomena that appeared after the employment of the solution that we were using later. I am now in a position to report further good results with Eucaine B. For the last two and a half months it has been used by Professor Schweigger in eye operations of the most varied kinds, including 49 senile cataracts, and with perfect satisfaction.

The anesthetic was complete, the vascular injection moderate. Corneal opacities did not appear, but it is important not to make the instillation too long before the time of operation. Four drops are sufficient, instilled five minutes before commencing work. Repeated and lengthy instillations of the 2 per cent. solution that is usually employed cause a considerable injection of the conjunctival vessels, and on section of the conjunctiva the abnormal hemorrhage may interfere with our sight of the field of operation. It is not yet decided whether the hyperemia exercises any favorable influence upon the healing of the wound. Mellinger attributes to the cocaine anemia an unfavorable effect in this respect.

When for any reason it becomes necessary to anesthetize the iris, which cannot be effected by the instillation of either cocaine or eucaine into the conjunctival sac, a few drops of the eucaine solution must be injected into the anterior chamber with a broad-mouthed pipette after the corneal section has been made. In two minutes at the latest thereafter the iris is anesthetic, a fact of which I have fully convinced myself by experimentation upon two rabbits, as well as in the case of one man affected with cataract. I shall not expatiate upon the other ocular phenomena occasioned by Eucaine B, as I have nothing new to report thereon. I shall only remark that in squint operations its action was really marvelous, and that in this field cocaine is not to be compared with it.

(1) Munch. Med. Wochenschrift, 1896, No. 22.
(2) Deutsche Med. Wochenschrift, 1896, No. 36.
(3) Munch. Med. Wochenschrift, 1896, Dec. 22.
(4) Deutsche Med. Wochenschrift, 1897, No. 6.
—Therapeutische Monatshefte, Berlin, June, 1897.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

ABSTRACT OF AN ADDRESS ON THE PROGRESS OF SURGERY AND THE TREATMENT OF SIMPLE FRACTURES.

BY A. PIERCE GOULD, M. S., London, F. R. C. S., England, Surgeon to the Middlesex Hospital.

Full success is only attained when the surgeon first reduces the displacement and then secures the part in his splint. The cases in which we fail and which give us the most anxiety are just those where we are unable to do this. Into the details of splints and bandages I cannot enter. Nothing is better than a well-fitting Croft's splint, and the more nearly any other splint approaches to the effect this gives the better it succeeds. Nor will I take up your time with any words on the value of passive motion, frictions, and careful use of the limb as soon as the union is strong enough to withstand the strain thus thrown upon the particular bone. For I want, in conclusion, to discuss what part operative interference may play in the treatment of fractures. Should we, or should we not, extend to fractures the same development of surgery that we have step by step extended to other injuries and diseases? Thus stated the question contains its own answer. Let us, first of all, be quite clear as to what operation can do for simple fractures: (1) It can exactly replace fragments in their proper position, and (2) it can mechanically fix them until the natural process of ossification is complete. In old ununited fractures it, in addition, opens up again the medulla from which the plastic callus is formed. Now, at the outset we ought to bear in mind one or two very grave considerations: (1) It goes without saying that such an operation must only be undertaken under conditions insuring an aseptic wound. If a simple fracture is ever transformed by the surgeon into a compound fracture it must be done only when all the special evils attaching to compound fractures can be absolutely excluded, (2) the exact fitting together of the fragments may be exceedingly difficult. All fractures are not like transverse fractures of the patella; many, indeed, are worse to piece together than any Chinese puzzle; (3) and even then the difficulties are not at an end, for our surgical means of holding fragments together are imperfect and in some cases very difficult to apply; (4) in fact, except in such cases as the patella or in uncomplicated oblique fractures of the tibia these operations are of extreme physical difficulty and, like matrimony, are "not to be enterprised nor taken in hand unadvisedly, lightly or wantonly."

My own conviction is that with due care and perseverance, particularly with the aid of an anesthetic, the cases in which the surgeon is unable to do his duty by exact replacement and fixation of the fragments are very few. But in those few cases I think it is incumbent upon the surgeon to put to himself the question whether the difficulties he meets with can with reasonable certainty be overcome by an operation. If they can and he has all the requisite means at command it is his duty to operate. He must be prepared to meet with considerable dif-

ficulties, and he must act with a clear and full recognition of his responsibilities. I would not for one moment advocate a general or a frequent employment of operations for simple fractures. Such a practice I hold to be needless, dangerous and ill-advised. But, on the other hand, I am prepared to contend that when other means fail to give us that result for which we should always strive, and which our patients ought to demand of us, a serious responsibility is laid upon us if we withhold from them the aid an operation may afford. I admit that here I am not on very firm ground, although I anticipate that in the future this position will in the main be generally held; but I am on quite solid ground when I plead for the general adoption of a higher standard of excellence in the repair of simple fractures and to this end urge the free use of anesthesia and the most patient and careful efforts in their setting.

—The Lancet.

AN EXCELLENT APPLICATION IN CASES OF ERYSIPELAS.

BY DR. L. B. PARSELL,
Closter, N. J.

Having used Aristol quite extensively as a substitute for iodoform in surgical dressing, it seems to me to possess all the advantages of the latter without its disagreeable odor. When dusted lightly over the margins of the wound after the stitches have been applied, it forms with the serum a thin antiseptic film under which healing rapidly takes place.

Dissolved in collodion in the proportion of 20 grains to the ounce it is a favorite local application with me in cases of facial erysipelas. It should be applied freely with a large camel's hair pencil over and a little beyond the inflamed area, and should be renewed as it scales off. Employed in this manner it relieves the intense burning pain, lessens the hardness of the tissues, and seems to limit the spread of the disease.

THE PRODUCTION OF ASEPSIS IN ACUTELY SEPTIC WOUNDS BY THE FREE APPLICATION OF PURE CARBOLIC ACID.

BY A. ERNEST MAYLARD, M. B. LOND., B. S.,
Surgeon to the Victoria Infirmary, Glasgow.

The following brief extracts of cases show the great potency of pure carbolic, when freely applied, of rendering rapidly aseptic all the parts of an acutely septic wound. In some of these cases the septic process was that of acute traumatic gangrene, and some ounces of pure acid were brushed over the raw and freely exposed surfaces. In each instance in which it was employed improvement set in immediately after the application.

Case 1. Extensive laceration of foot by railway accident; amputation; traumatic gangrene; free application of pure carbolic acid; cessation of septic process; cure.—A. B., aged 35 years, was admitted into the Victoria Infirmary in March, 1897. His foot had been badly smashed by a railway accident. The foot was amputated, but the stump became attacked with typical acute traumatic gangrene. The question became one of reamputation or a trial of carbolic acid. The latter method was selected, the whole wound exposed and the acid freely applied. Improvement was noticed the next day. The acid was applied daily for about a week until all smell had disappeared, all inflammation checked and healthy granulations were seen to be springing up. As soon as the stump was quite aseptic sufficient bone was removed to enable proper flaps to be formed.

In this case the man's great pain subsided, and all constitutional symptoms at once disappeared on the first application of the acid. No anesthetic was needed for applying the acid. The result of checking the septic process was to allow more of the limb being saved than would have been possible if reamputation had had to have been performed for the traumatic gangrene.

Case 2. Extensive tuberculosis of hip-point; acute suppuration; ampu-

tation of hip; acute inflammation and sloughing of wound; free application of pure carbolic acid; cessation of septic process; cure.—A girl aged 15 years, practically eaten up with tuberculosis and possessing little or no recuperative power, was admitted into the Victoria Infirmary in January, 1897. The hip joint had been excised some weeks previously; a large, acute abscess had formed in front of the thigh. The child's condition became such as to render it advisable to amputate at the hip joint. The anterior flap contained part of the lining wall of the large septic abscess. Transfusion of saline solution was performed immediately after the operation; the pulse and general condition greatly improved. Notwithstanding stuffing and dressing the large wound became actively septic and the girl was very ill. Secondary hemorrhage was feared, for considerable-sized sloughs were separating and the discharge was very fetid. The wound was freely opened up and every part of it copiously swabbed with pure carbolic. The following day showed much improvement both locally and generally. In less than a week the whole septic process was stopped; healthy granulations were seen springing up everywhere, the patient eating and sleeping well, with a normal temperature.

In this case matters looked as bad as they well could, and a nurse was in constant attendance for fear of secondary hemorrhage. In one of the dressings, after the wound had become practically aseptic and was healing rapidly, we discovered a part of the femoral artery with the ligature attached to it, which had almost separated. The artery itself, however, was well covered over with healthy granulations. It is therefore beyond doubt that had we not checked promptly the septic action we should have had secondary hemorrhage.

Case 3. Extensive laceration of foot; acute traumatic gangrene; free application of pure carbolic acid; immediate cessation of septic process; cure—A boy, aged 2 1-4 years, was admitted into the Victoria Infirmary suffering from an extensive lacerated wound of the foot, with dislocation of the internal cuneiform. The case was first seen by my assistant colleague, Dr. Grant Andrew, who replaced the bone, cleansed the wound and dressed antiseptically. In the course of a few days, however, sloughing set in, with acute inflammation and much fetor of the discharge. It was considered necessary to amputate. An attempt, however, was first made with pure carbolic acid freely applied to every part. Marked improvement at once set in, and the boy left the hospital with a serviceable foot.

The satisfactory progress which at once set in in this case after the first application of the acid was very striking. Every effort had been made by a prolonged submersion in antiseptic solutions to render the parts aseptic, but without avail, and amputation was urgent if the inflammation had not been stopped by the acid.

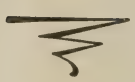
Case 4. Extensive laceration of forearm and hand; amputation; acute gangrene of stump; free application of pure carbolic acid; immediate cessation of septic process; cure.—A man, aged 27, was admitted to the Victoria Infirmary, having received an extensive lacerated wound of the soft part of the forearm and hand. An endeavor was made by carefully cleansing and dressing to save the parts. Amputation had, however, to be performed at the junction of the middle and upper thirds of the forearm. The stump became attacked with acute traumatic gangrene. The flaps were opened out and pure carbolic acid applied freely to every part. The septic process at once ceased, the temperature fell, and in the course of a few days the wound became quite healthy, and a good stump without further operation resulted.

In this case the man, on the morning following that on which the application had been made, told us he had slept well, had been free from pain and felt hungry. His temperature had fallen from 102.8 degrees F. to 99.4 degrees. Nothing could have been more striking than the comparison of the man's condition,

both locally and generally, before and after the application.

I could add other cases to those briefly narrated above to show how powerful is the germicidal effect (for such I believe to be the action) of pure carbolic acid in all kinds of acute septic cases, whether these be of the nature of acute abscesses or acute gangrene, or of septic inflammatory processes connected with malignant disease. There appears to be no pain connected with the application of the acid except so far as is entailed in the mechanical manipulation of the wound and its surfaces. When sloughs exist these should be practically soaked in the acid. On the living tissues the acid appears to have no deleterious effect. If allowed, however, to run over the skin it excoriates and causes pain.

—British Medical Journal, May 12, 97.



Current Literature in Obstetrics and Gynecology.

PREVENTIVE PLUGGING IN ABDOMINAL SURGERY.

Lauenstein insists on the practical value of temporary preventive plugging with sterilized gauze in operations on the hollow viscera of the abdomen. He would, in a case of laparotomy for perforating gastric ulcer for instance, after exposure of the stomach and removal by irrigation of its contents, plug the fistulous opening by a long strip of gauze passed into the stomach. He would then apply the sutures in a loose row, and on tying these one by one, would gradually remove the gauze. The discharge of any fluid remaining in the stomach during the application of the sutures or the separation of adhesions, may thus be avoided. This method is also strongly recommended in operations for gangrenous hernia, for cholelithiasis and fistula of the gall bladder, for cancer of the rectum and for perforating wound and rupture of the intestine and urinary bladder. The author points out, however, that in resection of the intestine plugging is not to be practiced independently of temporary compression of the divided intestinal segments by ligature or clamp. The introduction of a long piece of gauze is particularly useful in preventing the flow of urine into the peritoneal cavity during the closure by sutures of an intraperitoneal rent in the bladder.

—Centralb. f. Chir., No. 24, 1897.

DIABETES MELLITUS IN A YOUNG CHILD.

L. Rosenberg reports the case of a female child, aged 2 1-2 years, who had for eight weeks had much thirst, and had become greatly emaciated. Analysis showed the presence of sugar in the urine. She was a first child and had been breast-fed for seven months; thereafter she had had ordinary infant's food and no sweets. She had measles when 11 months old, varicella at 1 1-2 years, and had for six weeks taken phosphorous and cod liver oil for rickets. Her parents were healthy, and there was no family history of diabetes. She had a bilateral congenital dislocation of the hip and slight signs of rickets. The tongue was dry, the breath had no aromatic odor and the skin was somewhat harsh. The heart and lungs were normal, the teeth were good and there were no signs of disease in the nervous system. The urine, light yellow in color, had a specific gravity of 1029, contained no albumen, 5.2 per cent. of sugar and much acetone. Two litres was the daily quantity passed. Some slight improvement has followed the use of the ordinary antidiabetic remedies.

—Wien. Med. Presse, No. 20, 1897.

FACE PRESENTATIONS.

P. Dreyer emphasizes the difficulties met with in malrotated face cases. When the chin is to the front no other treatment than that employed in vortex cases will be needed, but when the chin is posterior one should leave the case to nature till after complete or nearly complete dilatation of the os externum and rupture of the membranes, one recognizes that in spite of good pains the chin does not in an hour or two pass into the pelvic cavity. If, then, there are signs of danger in the lower uterine segment, and if the fetal heart beats are diminishing in number and becoming irregular, the time has come for changing the presentation by "redressment." This treatment the author prefers to version, even when immediate delivery is necessary, and he follows it at

once by the use of forceps. He thinks there is less danger in applying forceps to the occiput in its high position than in trying version when the lower uterine segment is much distended.

—Norsk Mag. for Laegevidensk, No. 3, 1897.

HABITUAL ABORTION.

Charpentier dwells on distinct local conditions in otherwise healthy women free from syphilis, lead-poisoning and other general disorders. First, he traces abortion to ill-developed uterus; in the infantile type, with its long neck and short body, the muscular coat does not readily soften, yet remains very irritable, contracting and expelling the fetus about the third month. This condition is rare, but may be readily defined. Next come displacements, and especially flexions. Charpentier insists that the spur at the angle of flexion hypertrophies, and greatly interferes with uterine development. Replacement of the uterus in its normal axis will in many cases allow gestation to continue to term. The third cause of habitual abortion is congestion of the body and cervix, due to idiosyncracies. General or local bleeding may prevent abortion. Corporeal or cervical endometritis is a very common cause of abortion. The use of the curette to the pregnant cervix has undoubtedly allowed pregnancy to proceed to term in many instances where the patient would have miscarried without such treatment. In short, the curette prevents instead of provokes abortion in these cases. Lefour applies intrauterine stems to the uterus of a non-pregnant woman who has suffered from habitual abortion, as he finds that such treatment overcomes the individual intolerance of the uterus and makes it bear the presence of an ovum.

—Ann. de Gynec. et d'Obstet., May, 1897.

PUERPERAL INFECTION AND ABSCESS OF THE LUNG.

Chambrelent showed at a recent meeting of the Obstetrical Society of Bordeaux the results of a necropsy of a woman who had died in puerperium. She was about 22 years of age, and had been prematurely delivered at the eighth month of a dead and putrefied fetus weighing 2750 grammes. She had a rigor the next day, entailing douching of the uterus. She did not improve and curettage was had recourse to. This brought away some putrefied fragments. There was improvement for a day and a half, followed by a return of the high temperature and the development of a severe pain in the lower intercostal spaces on the left side. The uterus was washed out twice daily, but the temperature remained high. Signs of pneumonia were now detected, and later those of pulmonary abscess. The patient died on the twenty-sixth day of the puerperium, and at the necropsy a large pulmonary abscess was found, but nothing abnormal in the uterus or peritoneum. Chambrelent regards the abscess as due to a septic pulmonary embolus coming from the putrefied fetus and placenta.

—Journ. de Med. de Bordeaux, April 4, 1897.

POST-PARTUM HEMORRHAGE FROM A LACERATION IN THE VESTIBULO-CLITORIDIAN REGION.

Audebert describes a case of spontaneous delivery followed by hemorrhage from the vestibulo-clitoridian region. The patient was a primipara, 19 years of age, with a normal pelvis. The head presented in the R. O. P. position, and the second stage of labor lasted one hour. There was some difficulty in the birth of the shoulders. After the labor was over an irregular laceration passing obliquely downward and to the right was noticed between the clitoris and the meatus urinarius; it was separated from the vulvar orifice by quite 1 cm. of healthy mucous membrane. Free hemorrhage took place from it till it was arrested by the introduction of three catgut sutures. This was a primary laceration and was not occasioned by the extension of a tear of the vulvar ring. Audebert dwells on the importance of immediate suture in such cases.

—Journ. de Med. de Bordeaux, No. 24, 1897.

Therapeutical Progress.

INFANT FEEDING.

In an instructive paper on the ever-interesting subject of infant feeding Dr. A. T. Cuzner (Alkaloid Clinic) sums up the difficulties that stand in the way of cow's milk being a perfect substitute for breast milk, as follows: First, we have too large a percentage of casein in cow's milk (4 per cent.), while that of woman is but 1; second, if to reduce this large percentage of casein we dilute with water we are apt to overtax the child's digestive apparatus. On the other hand, if we can find some nitrogenous food substance to add in addition to water that will, as it were, dilute the casein, yet increase the nutritive value of the milk and not be a source of trouble to the child's digestive system, we will have done much to solve the problem. As a food product adapted for this purpose Dr. Cuzner looks with much favor upon Somatose, a preparation consisting of the albumoses of meat in an easily assimilable form, which is perfectly soluble in water or milk. Under the microscope with a power of 500 diameters nothing is seen but some air bubbles, the mixture being semi-transparent. Having tested this preparation chemically he indorses the observations of Dr. H. Wolf, whose experiments, made at the clinic of Professor Monti, of Vienna, have also demonstrated the value of Somatose as an addition to cow's milk, both as rendering it more digestible and nutritious.

DISINFECTION BY VAPOR OF PHENOLS.

In a thesis for the medical degree of the Victoria University Dr. J. Mountford Johnson, of the Owens College, Manchester, narrates certain experiments he has made to ascertain the values of the vapors of the carbolic acid group as germicides. "No. 5 carbolic" is said by the makers to consist almost entirely of cresylic acid, there being but a small percentage of phenol present. Dr. Johnson found that the vapor of 12 ounces acting for 16 hours in a room of 1500 cubic feet capacity did not kill staphylococcus, bacillus coli communis, anthrax spores or the bacillus of cholera. There was only inhibitory action. The bacillus of typhoid was the only one killed. The vapor of izal he found too heavy for disinfecting purposes in this way. In the "strength of eight ounces to 1500 cubic feet there is not sufficient penetration to even inhibit growth." The vapor deposits on glass as a fine film. When 12 ounces of cresol (commercially pure) were evaporated in a room of 1500 cubic feet the vapor was generally sufficient to destrop a six days' growth of the bacillus coli communis, the cholera bacillus, and a five days' agar culture of typhoid, but sporing anthrax on silk threads grew more abundantly than the control. Absolute phenol vapor had an advantage over izal or "No. 5" in its greater diffusibility and penetrating power. It even killed germs of such resistance as staphylococci and streptococci when wrapped in an envelope of filter paper. It killed other microbes exposed to the vapor with four failures out of 33 pieces of inoculated material employed. In three of the four the failure was evidently due to an accident of position. Dr. Johnson considers "that the vapor of absolute phenol in a strength of 0.64 per cent. is a reliable germicide for the majority of these microbes when exposed to its action in an ordinary room for 16 hours," but recommends a working strength of 1 per cent.; that is, the evaporation of 12 ounces for every 1000 cubic feet. The thesis also deals with the experiments of other observers on

these and other vapors, and details Professor Delepine's method of disinfecting walls by nascent chlorine obtained from bleaching powder. We are glad that the youngest of our Universities is encouraging original research on the part of its graduates. We learn from other sources that a considerable amount of sanitary assistance is being given to the health officers by professors of the Colleges affiliated to this University, not only in Manchester, where Professor Delepine has been working along with Dr. Nevin at the tuberculosis question, but also in Liverpool, where the subject of tuberculous milk is obtaining serious attention, and in Leeds, where for a couple of years Professor Trevelyan has been doing good work in the bacterial diagnosis of diphtheria.

—Lancet.

THE LOCAL APPLICATION OF SALICYLATE OF METHYL IN RHEUMATISM.

Lemoine reported to the Soc. Med. des Hopitaux the results of treating nine cases of rheumatism by the external application of salicylate of methyl according to the method of Linossier and Lannois (see Epitome, September, 1896, par. 270). He finds that thus applied it acts in acute articular rheumatism more rapidly in relieving pain than salicylate of soda given internally, and in doses of 154 to 185 gr. causes neither vertigo, deafness nor tinnitus. It is excreted in the urine as salicylic acid, the amount eliminated being equal to one-tenth of that used externally. The required quantity of oil of wintergreen, which contains 90 per cent. of methyl salicylate, is poured on a compress, covered with gutta percha tissue, and kept in place with a bandage. It is best to apply it directly to the painful part, but if this is inconvenient it should be applied to the surface of a limb, the good results being chiefly due to its absorption into the general circulation. In the discussion which followed Siredey stated that the treatment in his hands had been equally successful against the lightning pains of locomotor ataxy, and the pain of Pott's disease. He, however, found that 20 to 30 drops of the methyl salicylate was a sufficiently large amount to use. He had met with one case of intolerance in a woman with acute gouty arthritis, who after 50 drops had headache and tinnitus. Linossier said that this was the only case he had heard of, and the method had the great advantage of avoiding such complications, which were probably of gastric origin.

—Sem. Med., May 12, 1897.

A NEW THROAT SPRAY.

Dr. H. L. Armstrong, surgeon to the Manhattan Hospital, recommends the following prescription as almost a specific in acute inflammation of the upper air passages, both of the traumatic and nervous varieties:

R.—Eucain .....gr. x
Cocain. mur. .....gr. x
Aq. .....oz. vi
M. Sig.—Spray every hour in the nose sufficient to be felt in the throat.

If the patient is taught to inhale while using this spray, so that the solution may be carried well within the larynx, it is far more beneficial than it otherwise would be. The advantage of this combination is that, whilst cocaine is a valuable remedy of itself, the danger has been the liability of the patient to become addicted to its use. By the combination of eucain, which is a thorough local anesthetic in the nose, the nervous excitability produced by cocaine will not be developed, thereby making the prescription perfectly safe, as nobody will contract the cocaine habit by using this combination.

—New York Medical Journ., April, 1897.

CLUB FOOT.

In infants who have not walked on a congenital equino-varus the deformity can be easily cured by manipulation by correcting first the varus and later the equinus, and holding the foot in plaster of Paris dressing after each manipulation until over-correction is obtained. The child should then wear a retention apparatus for a year after it has learned to walk.

—Taylor, Maryland Medical Journal

Miscellany.

NARCOTIC POISON.

Dr. G. A. Gibson calls attention to the treatment of narcotic poison by employing strychnine to avert the paralyzing action of such drugs on the medullary centres. Toxic doses of narcotic poisons cause death by paralyzing the respiratory centre. For the past three years Dr. Gibson has used strychnine hypodermically in those cases or narcotic poisoning where there was any irregularity or interruption of the breathing threatening central respiratory failure. A more regular rhythm, together with greater depth of the respirations and increased rate, almost immediately shows the action of the drug. Dr. Gibson considers that two things often used in the treatment of poisoning by narcotics should be studiously avoided, viz.: (1) Making the patient walk and flogging him to keep him awake, and (2) the use of alcoholic stimulants. The former tends to exhaust the vital powers, the latter aid the action of the narcotics. He recommends that (1) the patient be kept in the horizontal position, (2) the respiration be carefully watched, and, on the least sign of irregularity, shallowness or inequality in the breathing, sulphate of strychnine be injected in doses of 1-150 to 1-50 (according to the age of the patient), the injection being, if necessary, repeated at intervals of an hour two or three times; (3) should the respiration, in spite of the strychnine, become worse or cease, artificial respiration should be promptly started; (4) strychnine may be used as a stimulant to the cardiac motor centres, aided by ammonia or ether; (5) should there be any spasm of the arterioles, nitrite of amyl must be used.

—Med. Times and Hospital Gazette.

DILATATION OF THE STOMACH.

PROFESSOR W. ABRASZOW.
Wratch, 1897, No. 1.

It is known that dilatation of the stomach is in most cases a secondary condition, following either a constriction of the pylorus or at the beginning of the deudenum. Author names this form "hypertonic." In a few cases dilatation of the stomach is due to an abnormal yielding of the stomach coats, following a congenital or acquired (long-standing disease of the stomach, severe illness, anemia, etc.) weakness of the muscularity of the stomach—atonic form. Finally the long continuance of ingesting rich foods and drinks may lead to a dilatation of the stomach. The significance of all these causes is varied; while the development of a dilatation of the stomach is a rule in cases where the passing of the food from the stomach to the duodenum is mechanically hindered, it is only exceptional occurrence in atony of the stomach. In the ingestion of such foods and drinks we have to deal more with a megologastric than a dilatation. The safest results in an objective examination are obtained by inspection and palpation, thereby the border of the dilated and filled up stomach can be best felt through the abdominal wall. The knowledge of the size of the stomach and the location of its lower border is of great importance, since many diseases may be so excluded.

The therapeutic measures in dilatation of the stomach is lavage. By it alone many cases of dilatation of the stomach were cured. When the dilatation is due to stenosis of the pylorus—operative interference.

THE TREATMENT OF CHLOROSIS.

Romberg (Berl. klin. Woch., July 5, 1897) concludes his papers on chlorosis by remarks upon treatment. He observes that every-day observation shows that iron cures chlorosis. He has seen five cases in which other treatment, continued from one and one-half to four weeks, produced no improvement. The author has treated cases with "carniferrin," saccharated carbonate of iron, and also with ferratin. Carniferrin contains 30 per cent. of iron in as firm combination as in hemoglobin. Romberg contends that we are no longer able to speak of absorbable and non-absorbable preparations of iron. The iron leaves the intestine in a micro-chemical form, but it remains to be shown how it is converted into the iron of the blood. The mode of absorption of the various preparations of iron is the same, but it is possible that one preparation may be absorbed in larger quantities than another. It was not proved that the more stable combination of iron in carniferrin was better absorbed than the looser one in the saccharated carbonate of iron. It is only necessary to give small doses of carniferrin. This agent was given in doses of 0.6 gr., the carbonate of iron in 1.8 gr., and ferratin in 3 gr. doses. The results obtained were much the same. Fifty cases treated with carniferrin showed a percentage of 64 cured, the average duration of treatment being 30.3 days. About 64 per cent. of 47 cases treated with the carbonate recovered in an average of 22 days. Six out of 12 cases treated with ferratin were cured in an average of 27.1 days. If all the cases are added together the average duration of treatment was 26.5 days, and the average increase of hemoglobin in 10 days was 9.9 per cent., and of the red cells 430,645. Leaving out the cases treated by ferratin as too small in number, the agreement between the results obtained by the two other preparations was striking. The author has never observed any gastric disturbance produced by the treatment. The agents were given in powder after meals. One preparation did not prevent relapse any more than another. Those treated as out-patients did not recover as rapidly as those in the hospital. The severe cases improve much more quickly than the slight ones. The hemoglobin steadily increased in a regular fashion, whereas the behavior of the red cells was more variable. No rule can be laid down in regard to the red cells.

CHELIDONIUM MAJUS IN CANCER OF THE UTERUS.

Winter and Schmitt (Centralbl. f. Gynak., No. 27, 1897) made use of Denissenko's treatment of cancer in 14 cases of uterine carcinoma. They employed the watery extract of chelidonium majus as a subcutaneous injection applied to several points in the abdomen once a week. In no case was there the least improvement, but in several the infiltration seemed to extend with unusual rapidity, and ulceration advanced with greater speed than before. Denissenko claims that the drug lessens the rapid disintegration of tissue, and even brings about encapsulation. No such improvement was seen in any of Winter and Schmitt's cases. In three instances, they admit, hemorrhage was checked. In all the general health was unfavorably influenced, deteriorating far more rapidly than in untreated cases of cancer too far advanced for surgery. The injections caused severe pain. Winter and Schmitt conclude that chelidonium should be rejected as a drug for cancer.

AIROL IN DIARRHEA.

Venuti and Barbagallo (Gazz. degli Osped. e delle Clin., May 30, 1897) give the results of the administration of airol in 11 cases of diarrhea. The dose given varied from 20 cg. to 90 cg. in the 24 hours. No

ill effects were noted, even when given for several days. Good results were speedily obtained in indigestion diarrheas. Each case is briefly reported. On the whole the results were decidedly good.

CALOMEL INJECTIONS IN LUPUS.

Scarenzio (Gazz. Medica Lombarda, April 19, 1897) reports three cases of lupus successfully treated with injections of calomel. The first case was that of a man aged 24, with lupus of the face, of seven years' duration. Admitted into hospital in January, 1896, the parts were freely scraped, and some improvement followed. On readmission in November, 1896, the usual remedies were tried without effect; on January 27 10 cgr. of calomel were injected deeply into the buttock. The local reaction was rather strong, so that the patient was obliged to go to bed. Four days after the injection there was well-marked improvement. Twenty days later another injection (of five cgr.) was given. The patient left the hospital on February 21, much better in every way. The improvement—when seen later—was maintained. Similar results were obtained in two other cases recorded.

FEEDING IN INHERITED SYPHILIS.

Troisfontaines (Journ. de Med., March 25, 1897) draws attention to the extreme importance of feeding with sterilized milk in cases of inherited specific disease, more particularly in those cases in which birth takes place before the term. In these cases the child is often of extremely diminutive weight, and the author quotes a case recently under his own observation in which on the twenty-fifth day after birth the child only weighed 750 g. There had been repeated attacks of pemphigoid bullae on the soles of the feet and lower limbs. The child was treated with Van Swieten's fluid, 20 minims being given in the 24 hours. The limbs were enveloped in wadding, and the diet consisted of sterilized cow's milk, the child having been weaned shortly after birth. About 18 g. of fluid, consisting of two-thirds sterilized milk and one-third water, were given nine to ten times in the day. By six months old he had almost gained average weight, and had had only two slight attacks of intestinal catarrh. At 2 1-2 years old he weighed 13 1-2 kg., and, with the exception of somewhat large and prominent forehead, there was no other morbid appearance, the teeth being well developed and normally situated. The author quotes other cases of a somewhat similar nature, all going to show the great importance of this method of rearing the child.

CHLOROSIS.

Biernacki (Wien med. Woch., No. 8, 1897) discusses the diagnosis of chlorosis, which is often difficult, as none of the symptoms can be considered pathognomonic. Much stress has been laid on the color of the skin, and this has generally been supposed to be due to deficiency of hemoglobin, but this the writer has found to be incorrect, for with the appearance of profound anemia there is often only the slightest chemical change in the blood, while with no apparent anemia the change may be profound. The color of the skin does not necessarily depend on the amount of hemoglobin present; there are other coloring matters in the blood of which little is known at present, and it is to these that the color of the skin is due in chlorosis. Many of the symptoms—for example, dyspnea, headache, etc.—have been attributed to deficiency of oxygen consequent on the deficiency of hemoglobin, but deficiency of hemoglobin does not necessarily diminish the amount of oxygen present, for it has been shown that there may be even more oxygen than normal in such blood.

The writer considers that great stress is to be laid on the clear appearance of chlorotic blood, and it is to this clearness, due to some anomaly of the blood pigments, in which hemoglobin plays little or no part, that the color of the skin is due. The color of the skin, however, is not essential to the diagnosis of chlorosis, which may exist with healthy-colored cheeks; in woman at the climacteric symptoms are sometimes seen exactly like those of chlorosis, with the exception of the color. The most constant change in the blood in chlorosis is hydremia—that is, deficiency of albuminous bodies, and although the prognosis of chlorosis cannot at present be determined by examination of the blood, the writer fancies that cases with profound hydremia get well more quickly than those with only slight hydremia.

PRIMARY STERILITY AND GONORRHEA.

Vedeler (Centralbl. f. Gynak., No. 26, 1897) investigated 310 sterile women, and found that undoubtedly gonorrhea is the most frequent cause of sterility. The average years of marriage in the series were three, the minimum one complete, whilst 72 of the women had been married over 10 years. Vedeler succeeded in examining 50 of the husbands, and found that 38 had had gonorrhea and 34 had infected their wives. He calculates that at this rate 235 of the 310 husbands probably had had that disease, and that about 210 must have infected their wives. Lest this calculation should seem fanciful Vedeler investigated 198 of the women where the health of the husband could not be satisfactorily determined, and found that they had suffered from local inflammatory changes, just as in the case of the 34 whose husbands had undoubtedly infected them.

CHAPPED HANDS.

The following is the formula of an ointment which is said to be useful for chapped hands:

R.—Menthol ..... 1 part.
Salol ..... 2 parts.
Olive oil ..... 2 parts.
Wool fat .....60 parts.

To be applied to the hands twice a day—night and morning.

—Practitioner.

PALATABLE CASTOR OIL.

A palatable emulsion of castor oil may be prepared as follows:

R.—Powdered acacia.....dr. iv
Castor oil .....fl. oz. j.
Elixir of saccharin .....mxx.
Oil of almonds (bitter).....mj.
Oil of cloves.....mij.
Distilled water, to make....fl. oz. ij.

Dissolve the gum in sufficient water and add the oil gradually; lastly add the flavoring.

Glycosin, saccharin and dulcin are all soluble to some extent in castor oil, and are serviceable for imparting a sweet and pleasant flavor, masking to some extent the disagreeable taste of the oil.

—Practitioner.

The Laryngoscope, published in St. Louis, has been selected as the official organ, for the year 1897, of the Laryngological Section of the New York Academy of Medicine.

This selection, and the great probability of the same journal being chosen by other Laryngological, Rhinological and Otological Societies as their official organ, would indicate that The Laryngoscope has become what its proprietors stated they intended to make it, i. e., The America Journal of Record for the specialties represented.

ATONIC DYSPEPSIA IN CHILDREN.

Comby (Medicine Moderne) gives the following prescription for atonic dyspepsia in children:

Tincture of Nux Vomica....m. xv.
Tincture of Calumba.
Tincture of Gentian .....aa dr. ss.

M. Five to ten drops of this mixture may be given after each meal to a child aged from 5 to 10 years.

Should the child at any time during the administration of strychnine seem to be suffering from the excessive effects of the drug, the stomach should be washed out and narcotics, such as chloral and bromide of potassium with inhalations of chloroform or ether, resorted to.

—London Practitioner.

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The Times and Register.

VOL. XXXIV. No. 4. PHILADELPHIA AND BOSTON, AUGUST 21, 1897. WHOLE No. 944.

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Original

INFANTILE INCUBATION.

ITS SUCCESS SANITARILY, HUMANELY AND MEDICO-LEGAL, OR FORENSIC VIEW, WITH CASES TO ILLUSTRATE.

BY J. J. CALDWELL, M. D., F. S. S. C., Baltimore, Md.

Dear Editor: The following report is submitted as being all-important to the culture of infants, viz., the heir expectant and the heir apparent, and the preventing of substitution of heirs infantile where large heredities are concerned.

The above is the forensic point. From a humanitarian standpoint you would make the following statement, i. e., as to which is most conducive to propriety—the poor mother tied up by penury, which calls for her daily labor from home to the neglect of her offspring, and who has the good fortune in the large cities of Europe to be able to place her child "en nourrice" each day as she passes the "Maison de Nourrice," and leaves her babe and her penny, and takes her check therefore, or among the Anglo-Saxon poor mothers, who, to insure quiet and repose, keep their children under the influence of some form of opiate, while the fashionable Teuton mother secures rest for her babe with Hyoscyamin, while she returns her round of calls, or the American mother, who with Mrs. Winslow's soothing syrup or Darby's carminative feels safe in her shopping expeditions for the entire morning, and the poor laboring woman

*Dedicated to the Mothers' Congress.

feels that she has done a good deed with the few drops of paregoric which will insure sound sleep during her hours of work away from home. Thus each country brings up a generation of "fiends" and "perverts." Now, why should there not be some humane "Maison de Nourrice" in our city?

I would respectfully submit the following letter from a grateful mother, showing what is possible with a little trouble to enable us to effect much towards the

INCUBATION OF INFANTS.

Dear Dr. Caldwell: My little daughter G——, who is eleven years old, was born before the time. When she came into the world she was extremely small, and she had neither finger nor toe nails. She was put in a large dish and wrapped in cotton, and the dish was set in a pan of hot water, the water being always kept at the same temperature. She slept nearly all the time, and would only wake to be fed. She was so small she could not use the bottle, and had to be fed with a cloth dipped in Horlick's malted miik and put between her lips. In that way she was nourished, and after two months were over she grew like other babies, and you could not find a stronger or more healthy girl.

The process we used is similar to the incubators used now for infants. Respectfully,

Mrs. G. C.

"The immense success which has attended the artificial incubation of chickens in France," says a Scotch medical (Glasgow) paper recently (1880-82), attracted the attention of Dr. Tavernier, a learned and ingenious physician of that country. He was attached to a hospital for foundlings, and, grieved at the large number of foundlings who die within the first six months of their lives, resolved to try what "artificial incubation" would accomplish if applied to infants. He accordingly had constructed a child incubator on precisely the model of the chicken incubator. It was a box covered with a glass slide, furnished with a soft woolen bed, and kept at a temperature of 86 degrees Fahrenheit by the aid of hot water. He selected as the subject of his first experiment a miserably-formed infant. This infant was placed in the incubator, provided with a nursing bottle and kept in a dark room. To the surprise of the doctor it ceased to cry on the second day after it was placed in the incubator, and although it had previously been a preternaturally sleepless child it sank into a deep and quiet sleep. The child remained in the incubator for about eight weeks, during which time it never once cried, and it never remained awake except when taking nourishment. It grew rapidly, and when at the expiration of sixty days it was removed from the incubator it presented the appearance of a healthy infant of at least a year old. Delighted with the success of the experiment, Dr. Tavernier next selected an ordinary six-months-old infant addicted to the usual pains and colic, and exhibiting the usual fretfulness of French infants. The child conducted itself while in the incubator precisely as its predecessor had done. After a six months' stay in the incubator it was removed and weighed, and was found during this period to have doubled its weight. It had become so strong and healthy that it resembled a child three years old, and it could actually walk when holding on to a convenient piece of furniture. These two experiments satisfied Dr. Tavernier of the vast advantage of artificial child incubation. He immediately proceeded, with the permission of the authorities of the hospital, to construct an incubator of the capacity of 400 infants, and in this he placed every one of the 360 infants that were in the hospital on the 10th of February last.

With the exception of one who had died of congenital hydrocephalus, and another who was reclaimed by its repentant parents, the infants were kept continuously in the incubator for six months when they were removed in consequence of having outgrown their narrow beds. The result will seem almost incredible to persons who are unfamiliar with the reputation of Dr. Tavernier and

have not seen the report made in 1880-82, Paris, France, to the French Government on the subject by a select committee of twelve. The average of these infants' ages last February was eight months and three days, the youngest being less than twelve hours old, and the oldest being not older than eleven months; their average weight was sixteen pounds, only one of the entire 360 having attained a weight of thirty-five pounds. At the end of six months of artificial incubation the average weight of each infant was twenty-four pounds, and there was not one that would not have been supposed by a casual observer to be at least three years old; in other words, six weeks of artificial incubation did as much in the way of developing Dr. Tavernier's foundlings as three years of ordinary life would have done. Now some of this extra flesh may not have been good fat, but the point is that the children did live, did thrive and did fatten rapidly by this inactive mode of nourishment in a heated atmosphere. We might cite the proverbial goose which was honored above his fellows in the flock by being taken in hand to furnish the famous pate de foie gras, for the epicure's table, where by being confined in a box into which he fits closely, with his neck only out, he is fed or incubated to his full satisfaction, the air of the room being kept to a high temperature. The bird is crammed daily with mush mixed with fat until his liver takes on a large amount of fatty matter, when he is killed, and the fatty liver is cooked and sliced up to be mixed with the pate (pie) material. We all know how inaction favors the deposit of fat in animals. We wish to fatten an ox—we soonest accomplish this by confining him in a clean, close stall, the warmer the better, giving him all the soft food or new corn he will eat, and all the fresh clean water he will drink. It is estimated that the animal will thus take on from one to two pounds a day, and thus keep ahead of other cattle which are fed on hard corn, hay, and which wander over the fields. Just so in London. In Leicester Square was once, and may still be, for all we know now, a large incubator where parties could get the eggs of their pet birds hatched. Miniature births were arranged along the wall of small rooms kept at 100 degrees, and every and each set of eggs was labeled and nursed by persons employed for the purpose —the hen egg for 21 days—the duck and goose egg longer. Even eggs were left there which had been brought from their native heaths, such as the paradise bird's and the ostrich's eggs. This then was regarded as a great curiosity; but now it is considered the cheapest way to raise chickens for early market. In Paris for a great while have been small "maisons de Nourrice" for little children scattered through the city, where mothers going out to work could leave their babes for the day. This was not connected with any foundling establishment, but was the result of a limited charity, where charitable individuals wished to aid, and yet not support, the children and mothers. The poor mothers would nurse their babes at the "nurse house" there and leave it to be fed and cared for until she had completed her day's work, probably a mile away, when she would return to find her babe clean, well fed and happy. For this accommodation she paid from one to five sous each day that she left her babe. This was a sort of post-incubator so to speak, and often it would have been better for the little one not to have been born (incubated), if there were to be no helping hand for its sustenance afterwards. Then they have the "Hospital des Enfants' Malades," where sick children were taken to be treated until they were well, or dead, for many children die when sent to hospitals surely. They are there "nobody's darlings," and are lucky if they live at all. Then there are what are called "tours," which work like boxes on a pivot, which are turned so they will project out of the window when the bell is rung. The new-born babe is laid in this box, with, maybe, some mark to identify it in after years, and this is the "Hospital des Enfants Trouves" (foundling). Since the establishment of these tours or baby boxes, the

crime of infanticide lessened greatly in France. But the so-called creches or nurseries most resemble incubators in keeping fed and warmed the new-born babe. In these creche (cradles) maisons if the child is one year old it may have a cradle to itself in the form of a little basket. These places open early in the morning and close after dark. Up to 1852 the number of babies who enjoyed the benefit of these cradle establishments is said to be 11,000. Now that the population is so greatly increased, naturally there are more such establishments. A physician attended each creche hospital (maison) daily, and the poor mother was thus afforded a means of caring for her offspring and of performing her work besides. Give a new-born babe quarters, warmth and food, and it will thrive well, barring colics and contagion.

In this connection we would call the attention of such as have the burthen of rearing young infants to the great importance of selecting first the kind of food essential to the ready, easy and complete nourishment of such feeble individuals. We need a food not all starch, as some of the advertised foods really are, and one which does not require to be enriched with cow's milk, but one which combines all the advantages of the best infants' food without any of the objectionable features seen in so many now on the market, and we have long since settled on Horlick's malted milk as the food par excellence for babes. Its freedom from starch renders it a food which is readily digested, and it appears to be properly malted without being burnt. It is strong enough in sugar, dextrine, fats and albuminoids, without having the tendency to produce starchy indigestion.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

The subtle and mysterious atomic changes incident on the evolution of a new growth, a true tumor, quite staggered the great philosophic mind of John Hunter. In vain and repeatedly he sought to penetrate the difficulties in the way, but without effect; and hence, in the voluminous work of the extraordinary investigator, it will be observed, that when dealing with the pathology of tumors, an obvious reticence is observed or opinions are expressed with reserve.

Virchow's great work, from which so much was promised on this topic, in its bearing on cellular pathology, has given us nothing, and was most disappointing; when the illustrious Heitzman demonstrated that the cellular theory, cellular multiplication, a regeneration from pre-existing cells, was a myth.

Conviction on this point was brought home to the skepticcal, when, in the case of the late, lamented Crown Prince of the Germans, who was seized with malignant disease of the larynx, and so great an authority as Virchow, himself, in an examination of a clipping of the growth, pronounced it a "papilloma," or, in other words, confounded a wart with an epithelioma. Vast and exhaustive has been the study of the neoplasmata during the latter half of the present century, and while little or no progress has been made in widening our knowledge of those of the cancerous group, yet the advance in the way of isolating, differentiating and classifying them has been great. By this means, we have been enabled to weed out, as it were, or cast aside, as essentially benign, very many types of hypoplasia, formerly mistaken for malignant; for example, actinomycosis, tuberculous ulceration in the passages, syphilis, and other specific or simple forms of the granuloma of an infectious origin.

The words "tumor" or cancer" convey a harrowing impression to the unhappy victim.

Let us designate them "gatherings, enlargements or swellings; in fact,any by term implying ambiguity until, by a proper examination and observation of the case, we are assured with certainty that the case is one demanding the intervention of surgery, or active measures of any description.

A definite examination of this class of cases in our time implies very much more than formerly. This fact cannot be too strongly emphasized, inasmuch as now we are in possession of quite definite and absolute resources of diagnosis, never utilized or understood until recently.

The mechanical exploration of the passages, transillumination, the Roentgen rays, microscopical analyses of the corpuscular elements, etc., with a searching inquiry into the symptomatology and the clinical aspects of the case, all are free to flash the path and clear the way of many obstacles and barriers in the way of grasping the salient features of the case. Sometimes, however, especially in neoplasmata involving the viscera, or conditions simulating tumors, very great embarrassment may be encountered.

The writer, on his present tour in Europe, lately witnessed a striking example of this in a case which he was kindly invited to see operated on.

The patient, a middle-aged person, gave all the clinical and physical evidence of a cancerous tumor, high up the rectum. A krake had been proposed, but promptly refused. It was then decided to perform Madyl's operation or an inguinal colotomy en deux temps. But the day after the intestine was fixed in the incision the patient had a very large, spontaneous evacuation, per rectum. Scyballae of hard consistence and great size were evacuated with immediate relief of the symptoms and a total obliteration of all the signs of the "tumor." It has been my experience to have several times noticed the singular freak of colic peristalsis, after the most persistent obstipation when an anaesthetic is freely given; and, as in above case cited, all in whom I have observed it were females.

All humanity is profoundly indebted to surgery, which will add years of life and freedom from the pain of a new growth or unchanged obstruction; but the reward is greater, if the same result may be accomplished by remedies directed to the deranged tissue metabolism, degeneration, or other causes which produce it.

Society Reports.

OBSTETRICAL SOCIETY OF CINCINNATI.

OFFICIAL REPORT. MEETING OF FEBRUARY 18, 1897.

The President, Rufus B. Hall, M. D., in the Chair.

E. S. McKee, M. D., Secretary.

DR. JAMES FRANKLIN HEADY REPORTED

TWO CASES OF PUERPERAL CONVULSIONS TREATED WITH LARGE DOSES OF MORPHINE HYPODERMICALLY.

(See next issue.)

DR WILLIAM GILLESPIE READ A PAPER ENTITLED

FORCEPS ROTATION IN OCCIPUT POSTERIOR POSITIONS OF THE VERTEX. (See next issue.)

DISCUSSION.

Dr. Giles S. Mitchell—I will not consume much of the time of the Society. I want to congratulate the gentlemen and the society upon the elaborateness of these initial papers. Both of them are even above the high standard of the good papers presented by candidates for admission.

I was extremely interested in the recital of Dr. Heady's cases of puerperal eclampsia, and he certainly is to be congratulated upon being successful in saving two patients, who were, from his description, almost beyond hope of recovery. While I have long ceased to recognize albuminuria as an important factor in the production of puerperal convulsions, yet in the few cases that I have seen in my own practice and in consultation, an examination of the urine has never failed to reveal a very large per cent. of albumen. In this particular the two severe cases related by the essayist, so far as my own experience goes, are unique. I have never had any experience in the use of large doses of morphia in puerperal eclampsia. I know that its exhibition is recommended very highly, and a proof of the judiciousness of the practice has been established in a measure by the recovery of two so serious cases that were reported by the essayist. It has been my habit in these cases to rely almost solely on very large doses of chloral hydrate. I give a drachm of chloral hydrate by the rectum, and repeat it if necessary. The accouchement force, as practiced by the doctor, the rapid dilation of the cervix and the immediate delivery of the child, I believe, at least where the os is dilatable, is judicious practice, recognizing, however, that any violence in the accomplishment of this is liable to bring on a convulsive attack. The accouchement force is also a conservative measure in the interest of the child. I believe puerperal eclampsia has no pathology, so to speak, but that pregnancy is the great physiological test of mental and bodily soundness in women, and that what would excite a puerperal convulsion in a woman with an unstable nervous system would not bring about a seizure of this kind in a woman who was perfectly healthy.

As to the last paper I said at a recent meeting of this society all I have to say about the management of occipito-posterior positions. My experience with this class of cases has not been very large, although a few years ago I had quite a large obstetrical practice. I have never seen a difficult case of occipito-posterior position. Undoubtedly these do occur, but I believe they must occur very rarely. The vast majority of them, as the gentleman has stated in his

paper, take care of themselves. And I am sure that it would require more than an ordinary amount of skill in the use of the forceps to apply them when the head is high up, in order to accomplish rotation. In this position it is desirable to grasp the head in the bi-parietal diameter. The blades of the forceps naturally follow the sacral curve, and you are almost certain to apply one blade over the forehead and one blade over the occiput, and in this way you are more likely to complicate matters than to simplify them. I believe the safer plan is to simply introduce the hand or vectis. But I have never been called upon to put this into practice at the bedside. I have seen cases deliver spontaneously, the occiput sweeping the perineum, and in two instances there was some laceration, but not serious.

Dr. Thad. A. Reamy—I would like to ask Dr. Heady what the condition of the pupil was at the time the patient was comatose before he gave the morphia.

Dr. Heady—It was contracted.

Dr. Reamy—The type of cases presented in Dr. Heady's paper, in which there is no evidence of any serious renal deficiency as to the quantity of urine that has been excreted before the attack, and no evidence of albumen or casts, and where the cases are so topically nervous in character as these were, in the incipiency at least, those are the cases that are pre-eminently adapted to the morphine treatment, and the doctor was, therefore, judicious in selecting that treatment for this class of cases. Clark wrote the first paper and made the first elaborate report upon this subject, and called attention to the use of morphine, and I think it is now the custom of pratitioners to use the morphine treatment in that class of cases. In a paper before the American Gynecological Society, three years ago, I reported that I had used morphine in large doses in a few cases such as have been described this evening. The clinical history Dr. Heady has given us; however, it is extremely interesting that associated with the unconsciousness there was contraction of the pupil,and that in that condition the action of morphine was so gratifying. I have seen coma follow the convulsions when there was wide dilatation of the pupils. Of course, that is a very serious combination, and I have felt afraid in such cases to give large doses of morphine. I doubt if I would have had the courage to give such large doses where there was already contraction of the pupil, yet the result in Dr. Heady's cases shows the wisdom of his practice.

While I do not rely upon any one remedy in the treatment of cases in general, yet I think it is recognized that in the large majority of cases of puerperal eclampsia there is renal insufficiency. In other words, there has been an imperfect action of the kidneys. I do not mean to convey the idea that I think these convulsions are due to this; I think it was all wrong to call them uremic convulsions, but in most cases, even of nervous origin, we have albumen in the urine at this time, if we do not have it before. Without any doubt, in the vast majority of cases there is excrementitious material in the tissue, that ought to be eliminated by the skin or the kidneys, or both, and therefore any plan of treatment should be, first, to control the convulsion in which there is the greatest danger; second, to relieve the conditions on which the convulsion depends. But I do not believe, as was advocated by a few prominent speakers in a recent discussion of this subject in New York, in the rapid and prompt delivery in every case. I do not believe that is always wise. I think the class of cases in which speedy delivery should be practiced is distinctly defined; I do not believe, in a large percentage of these cases, that when you have removed the child you have the conditions upon which the convulsions depended. In one of Dr. Heady's cases the convulsions came on after the delivery, and in some of the worst cases I have ever seen that has been true. In a fatal case in the West End the woman had no convulsion until after the delivery. Indeed, other things being equal, the convulsions coming on after delivery are more likely to prove fatal than when they come on

prior to delivery. If the delivery can be accomplished, it certainly is well and desirable, especially in a nervous case, particularly when we are able to deliver with so much facility as Dr. Heady did in one of these cases. When the convulsions are coming on rapidly, the remedy above all others is the use of large doses of veratrum viride. I use this hypodermatically in doses as large as forty drops, and scarcely ever would I begin with less than thirty drops of Norwood's tincture of veratrum viride. If the woman could swallow and was still conscious, and the convulsions were not coming on very rapidly, veratrum viride could be given by the mouth and would manifest its action in twenty or twenty-five minutes. I have made it a rule to continue the use of this remedy until I have brought the pulse down to about 40 or 50. It then is rather difficult for the patient to have a convulsion, because the action of the convulsive centres is pretty well suspended. In these cases veratrum viride produces just the same condition that you would secure by large blood-letting. In this way we may secure all the good that we could from blood-letting, unless you take the ground that we get rid of improper material by blood-letting, which is very far-fetched. The advantage is that you bleed the vessel into the vessels of the viscera, by the action of veratrum viride upon the vasomoter centres, and thus you retain the blood. Another great advantage is that when the convulsions have been suspended and the immediate danger is past veratrum viride acts with great efficiency as a diuretic, and before that produces profound diaphoresis, so that in these two ways you secure the elimination of the material which is doing the damage in the blood.

Dr. G. S. Mitchell—I believe the majority of those who advocate the accouchement force, do it more in the interests of the child than to prevent convulsive seizures.

Dr. Reamy—It is advocated for that purpose. But one of the gentlemen, to whom I have referred, took the ground that the presence of the child caused the convulsion, and he proposed to forcibly dilate and de-deliver. He said he could dilate and deliver in 20 minutes.

The rotation, to which Dr. Gillespie has referred, I will not discuss. It is well known that I have been in the habit of rotating with the forceps. In the first place, to use an instrument as Dr. Gillespie has described, it must be an instrument without too great pelvic curve. In the next place, the blade of the instrument must not be too thick. I suppose Dr. Gillespie is accustomed to using an Elliott forcep or a Smedley forcep, or some such instrument.

Dr.C.D.Palmer—It is unfortunate that these two valuable papers have been brought forward this evening at the same time. There is enough for us to discuss in one of these papers without touching the other. And I will not say anything about the second paper, although I think it is very commendable. I do not want the gentlemen to think I do not appreciate it.

I have never seen a case of puerperal convulsions, that I can recall, in which the urine was not albuminous. I do not mean to say that the urine is invariably albuminous before the convulsion, but if it is not albuminous before the convulsion it becomes so afterwards. There seems to be something in the convulsion that interferes with the action of the kidneys, so that the urine may become albuminous afterwards. In view of that fact, I asked the gentleman if he had examined the urine of the patients after the convulsions, and he said he had not. I think if he had done so he would have found albumen, consequent upon the convulsion. I think it is well recognized that not all these cases of convulsions are uremic. There is a consensus of opinion now that convulsions may be due to a toxemia, the kidneys, skin or the bowels being at fault, from the pregnant condition. Emotional causes, of course, will cause these convulsions. Now I take it that these two cases were such as belonged to the hysterical or epileptic variety, and not to the apoplectic variety of eclampsia, and I take it that they were exactly the class of cases in which we would ex-

perience good results from the hypodermic injection of morphia. I have never given such large doses of morphine hypodermatically as reported this evening. I usually give gr. 1-4 of morphia combined with atropine. I never have given more than gr. ss. of morphine at a dose, and I usually give it with gr. 1-100 to gr. 1-50 of atropine. In a case of puerperal eclampsia I would first think of emptying the bowels; then of acting upon the kidneys or upon the skin. There is a potent influence, which we ought not to ignore, from the administration of chloral. I think all the good effect of chloral may be obtained by giving it per rectum, repeating it if necessary. Veratrum viride, I believe, is the best remedy in these cases. I give it by the mouth, or, if it is necessary, hypodermatically. It is good in almost any condition of uremic convulsions, but particularly is it of value in the apoplectic form of the disease. I think the action of the morphine is aided by the veratrum viride. These medicines do not counteract each other, but they help each other.

Dr. Charles B. Schoolfield: I have had three cases of puerperal eclampsia. The experience of nearly all obstetricians in regard to these cases is that every case is largely a law unto itself. Each case was treated differently. One of them died. In the first case the convulsions came on after the child was delivered. The woman never came out of the convulsions and died. The second was one in which I was called in consultation. The woman was in convulsion and we bled her. She came out of the convulsion and recovered. At the time approaching her next parturition she again began having symptoms of convulsions, headache and dizziness, and a few days before the confinement I bled her freely. The headache and all symptoms of convulsion disappeared, and she went through her parturition without any trouble. About two years afterwards she again became pregnant and had the same conditions preceding the parturition. She began to have severe headache, the urine was loaded with albumen, as it was in both the other pregnancies, and I again bled her freely at her own request, because she felt in both the other pregnancies the bleeding had helped her. She passed through confinement safely without any puerperal convulsions. The next time she became pregnant, when the time approached for her parturition, instead of bleeding her I began giving her the bromides and chloral. That relieved the headache for the time being, but her headaches continued after delivery, and her urine was not up to the normal in quantity, and was still alubuminous. I kept on giving the bromides and the hydrate of chloral. On the tenth day she had a stroke of apoplexy, with hemiplegia and coma, and died in a few days without gaining consciousness. I think if I had bled her as I had before I would have saved the woman.

In another case I gave veratrum viride. The patient began having convulsions about ten or twelve days before labor. After giving two or three full doses, gr. xxx, the symptoms all subsided and I stopped giving the remedy. The patient had no further symptoms until the day of labor. She then commenced to complain of headache, and fearing convulsions would come on I again gave her thirty drops of veratrum viride. She then went through labor without any trouble. I believe if I had given veratrum viride in the previous case it might have saved the patient. But the bleeding acted promptly, relieved the headache and the arterial tension, and made the condition of the patient very much better. I have never bled in any other case, because I did not think it necessary, but in cases such as that I think bleeding is an excellent thing.

Dr. W. D. Porter: I, too, regret that the evening is so far advanced when we have two such good papers before us. In the first case of convulsions I think the result was due perhaps as much to the emptying of the uterus as to the medication. The administration of large doses of morphia relieved the condition, but I think some drug which would lower the blood pressure would have acted better. While, as Dr. Reamy says, it is not desirable to use violent measures to empty the uterus, yet I think

prompt measures are desirable. I have seen but two cases of puerperal convulsions. The first, a most appalling case, occurred in the person of my own sister. I was called to that case a long distance away after the patient was unconscious fourteen hours, and had had twenty-five convulsions. The pregnancy had advanced to the seventh month. There was complete suppression of the urine. The cervix was dilatable, and the treatment consisted in emptying the uterus promptly and using pilocarpine hypodermatically. In a little while there was profuse perspiration. In addition to the pilocarpine, purgatives were also used. After this there was but a single convulsion. The condition of coma, however, remained about eighteen hours after the treatment. Then the patient gradually recovered consciousness, but was unable to sleep much for a long time. Four days afterward she had an attack of puerperal mania lasting two or three hours, which failed to yield to chloral or bromides, but finally yielded to chloroform, and after a sleep the patient made a slow recovery. Partial hemiplegia persisted for several months afterwards, gradually clearing up.

The second case I saw in consultation in the city. In that case the convulsions came on soon after delivery. The patient had three convulsions. Veratrum viride was used with very good results, at first, gtt. xx by the mouth, and afterward the same dose hypodermatically. The action of the drug in this case was very prompt. After the use of the drug hypodermatically the pulse rate fell from 130 to 60, a diminution of more than one-half, inside of twenty minutes.

As to the occipito-posterior position being a rare condition, as was said by one gentleman, I think it is far from a rare condition. The gentleman referred in his paper to the fact that often the head remains above the brim and fails to engage, because the occiput is posterior. I think I have seen several such cases, and I think many cases thought to be cases of rigid os are really cases in which the head does not engage promptly, and, after it does engage, descends slowly because the occiput is posterior. I do not think the gentleman recommended the use of the plan he suggested in all cases, but only would assist nature to rotate if possible, and, if not, would favor the descent of the head and accomplish rotation at the outlet. I confess that perhaps I have always been prejudicial in the use of the forceps in changing the position of the head in these cases. I think the method described by the gentleman is an excellent one, and in some respects superior to other methods of rotating with the forceps. In the first place, you can secure flexion of the head, and I do not think this can be done with the forceps at any other point than at the outlet. You can grasp the head so as to make proper leverage, and you can move the handles in a sufficiently large arc to cause flexion.

I had a case perhaps a month ago in which I tried the method described by the gentleman this evening, who had previously described it to me in a private talk. The case in which I tried it was one in which the head descended to the pelvic floor without any difficulty, and I simply applied the forceps as described in the paper, flexed and then rotated the head and delivered the child, with very slight tear of the perineum.

Dr. A. W. Johnstone: I believe we are just on the verge of finding out much we have not heretofore known about these cases. I believe paraxanthine is at the bottom of it all, and if any of you will give me at least a quart of urine from such a patient I will see that it is properly examined. The concrementitious materials are not excreted. We know now that urea is very little more poisonous than bicarbonate of soda, and it is all a mistake to call these uremic convulsions. That is a thing I have known only about six months, although to the older physiologists it has been known a few years. The hysterical, apoplectic and other varieties, I believe, are simply, like petit mal and grand mal, etc., due to the presence of some poison. No woman with puerperal convulsions ever had

as hard a time, and not die, as did one case I saw. The convulsions were simply terrible, and the coma that followed proved beyond a shadow of a doubt that it was due to paraxanthine, and I saw six or eight mice and one guinea-pig killed by the paraxanthine gotten out of a quart of urine from that patient. They were attacked by the same kind of convulsions that we saw the woman have. If there is anything in the reproduction of symptoms in toxicology, here we have it exactly. I have never seen but one case of puerperal convulsions in my life. The case was also seen by Dr. Mitchell. The patient got well very promptly and had very little trouble. Suppose these cases are due to paraxanthine, how are we going to treat them? Others have been on the right track in trying to get rid of this material in one or two ways: One is to get it clear out of the body, and the other is to drive it back into the tissues, where it is harmless for the time being. Now, all your morphine, chloral and all the anodynes, act on these compounds just as they do on uric acid. It is a well-known fact that you can stop the formation of uric acid very largely by the use of these remedies. It is very interesting to read up the control of uric acid by these drugs. But to me, if the patient was anything to me, one for whom I would do my very best, I would feel very much like bleeding her, but I would bleed in a different way from that suggested this evening. At the same time that I would make a venesection I would have a saline solution going in, as was suggested in a little article I read somewhere recently. It was found that the patients get well readily when given saline solution at the same time they were losing blood. It struck me then that the next case of convulsions I should treat upon the same plan. So far it has been found that paraxanthine is not excreted by a diseased kidney. Thus, paraxanthine was found in the blood of a man who died of convulsions in Bright's disease. Now, we want to see if we can find it in the blood of these eclamptic patients. Dr. Rachford said recently he would be glad to examine the blood from one of these cases of eclampsia. Should any of you have such a case, if you cannot get the blood to Dr. Racheford, if you will sent it to me I will see that it gets to him. Such an examination will enable us to know just what these poisons are.

As to the last paper, I have expressed my views upon that when we had the subject up before. I have had eleven cases of occipito-posterior position, of which I saved every case but one. In the case that terminated fatally the cord had been down and pulseless six hours before I saw it. With slightly curved forceps I have had no trouble turning in these cases. It is true in some cases we have to push the child up some before we can turn. But we should never be satisfied until we have the child by the back of the neck, when we can dislodge the head and push it in almost any direction we desire. In the last case I had the head was clear up above the brim of the pelvis, and I had only about half the pelvis to work in, for the right side of the pelvis was filled with a cellular swelling (that disappeared in a few months), and I succeeded in delivering the child all right. If the child that died had been living when I saw it I believe I could have saved it.

Dr. Mitchell: Did you make this rotation above the pelvic brim?

Dr. Johnstone: Yes, sir.

Dr. Mitchell: What was the occasion for it.

Dr. Johnstone: It was a case of occipito-posterior position in which the head of the child could not descend because of the swelling. I am glad to hear the doctor's test with the spinal fluid. Goodell told me of scores of cases in which he had done this way. At that time it seemed to me difficult, but I have done it in four cases.

Dr. Porter: I would like to ask Dr. Johnstone if he would not prefer to turn in such cases.

Dr. Johnstone: Well, my arm was not long enough for that in this case. The occiput was low posteriorly, and could not be budged with the hand, and so I applied the forceps and dragged it through, although it is

true it took me an hour and a quarter to do it. I have never known just what the swelling was. But even in this kind of complication it is possible to turn the head and apply the forceps right. The only difficulty is to apply the forceps after the head is in the right position. I am surprised that the method of Goodell is used so little here in Cincinnati. As for hurting the mother, if the forceps fit all right, and particularly if you have the stops in the handles and do not leave any of the blade sticking up, you will not hurt the patient at all. In none of these cases did I do more than to nick the perineum, and in that case the perineum only had to have two or three stitches in it.

Dr. Rufus B. Hall: I do not want to discuss at any length the subjects presented this evening by the essayists, for two reasons: First, as has been expressed by several speakers, either paper would be sufficient for the evening; and, second, the time is so limited.

I want to say a few words in reference to the first paper, by Dr. Heady. I do not want to say it as an apology, but it is a fact that I do not do obstetrical work now. I rise to speak for a special reason, that will be apparent. I will only emphasize some remarks made early in the evening. Let the cause of the convulsions, in some cases supposed to be nervous, be the xanthine bodies or of nervous origin, it matters not, providing we are on the right road in treatment, as suggested by the last speaker. If we are treating these cases rationally and intelligently, it matters very little to us whether or not the cause is the xanthine bodies or uremic poisons or reflex from the nervous system. The essayist certainly reported two very interesting and remarkable cases, and the results sustain the treatment. The treatment gave results better than could be expected from any treatment before it was tried. But what I arose more especially to emphasize was a remark made by Dr. Reamy in emphasizing the veratrum viride treatment in puerperal convulsions as we ordinarily see them. I do not believe in societies like this we emphasize the importance of this treatment as much as we should, and I only want to report a case to emphasize that point. Not many weeks ago I was asked to see a case in one of the suburbs. It was a case of convulsions in a plethoric woman about forty years of age, her first confinement. I promised to see the case in consultation because they could get nobody else, and only on condition that they would release me after the first visit. I said to the doctor over the telephone: "Now, won't you give the patient a hypodermic injection of thirty drops of veratrum viride?" He asked if I wanted him to kill her. I replied that if he would promise to do that I would come. He promised to do it, but the consulting physician objected to it. I saw the patient an hour afterward and found she had had five drops. It had had no effect. The woman had had a number of convulsions, and was in a dying condition. At first neither one of them would consent to the hypodermic injection of twenty-five drops more. Finally, when the patient seemed almost dead, they allowed me to inject twenty-five drops more. In half an hour I noticed some effect. In three-quarters of an hour the patient was given ten drops more of veratrum viride. In half an hour the pulse was 80 and she was semi-conscious. Then the doctors were converted. The patient was given ten drops every hour until the pulse was down to 50. The patient never had another convulsion, and is well to-day. The reason I report this case is to emphasize the importance of bleeding into the veins, as it were. But few men have the courage to give sufficiently large doses of veratrum viride on their own responsibility. When this treatment was first suggested I thought I would as soon shoot the patient, it seemed to me so dangerous. But it is just what these patients need.

Dr. Heady: Each patient had a convulsion after delivery, and I did not give the morphia until after the convulsions appeared after delivery. Often the convulsions stop when the child is delivered. I do not want the society to believe that all my cases have recovered; not by any means.

The first case I saw was some fifteen years ago. The urine was loaded with albumen, and the patient showed general anasarca. Delivery was accomplished without convulsions, but an hour after delivery convulsions began and continued until the patient died. In that case I used morphia and chloral without effect. I think the use of morphia and chloral is good treatment in the nervous variety of puerperal convulsions.

Dr. Gillespie: As to the application of the forceps to the bi-parietal diameter, Dr. Mitchell has said that this is difficult when the head is high up. Of course, it is impossible to apply the forceps in this way at the superior strait, but it is quite different when the head is low down; but when the head is even high in the cavity it is often possible to grasp the head regularly, and we should do so for the reasons stated in the paper. I think if he were to take the trouble to apply the forceps as I have described he would find delivery much more easily accomplished. I frequently, before I began this method, had very great difficulty in delivering some cases. Another objection to applying the forceps irregularly, and one I fear I did not emphasize enough, is that if you apply the forceps with one blade on the forehead and the other on the occiput you have a much more insecure hold in the posterior than in the anterior position. If it is an anterior position and you squeeze the handles together sufficiently to keep the forceps on the head, if any rotation takes place the occiput will swing forward; but in occipito-posterior positions the tight gripping of the handles will cause the occiput to go backward. This is what first called my attention to occipito-posterior positions. The case was one in which the forceps slipped when not applied in the bi-parietal diameter. I pulled and pulled until I was satisfied the child was dead, and then I perforated with a pocket knife and got through with the delivery. Such an experience is not pleasant, and I began to think about these cases. With the head below the brim, I would prefer, if I could bring it down without great force, to bring the head down on the perineum and rotate. Dr. Reamy referred to the pelvic curve. I do use the Elliott forcep, which has not a very excessive curve. The manipulation high in the pelvis, which I have described, however, I think could be accomplished by the double application with any ordinary forceps. By turning the head in the transverse diameter and applying the forceps in the opposite diameter you can complete rotation and delivery. But the rotation at the inferior strait or on the perineum is the easiest maneuvre I have ever executed with the forceps. The main secret is to have the forceps applied on the bi-parietal diameter, bring the blades parallel with the long diameter of the head and then flex and turn without force. The first time I delivered with the forceps in the reversed position I simply grasped the forceps, resting the handles under the forearm, and lifted the head over the perineum in order to see how the blades applied themselves to the head.

REPORT OF A CASE.

Dr. Magnus A. Tate: At the last meeting of the Obstetrical Society I presented a specimen of urine (coagulated), and I now give a somewhat detailed account of the case.

Patient, aged twenty-two, colored, well developed, primipara, seven months pregnant, entered Ohio Maternity Hospital, December 21, 1896, at 11 A. M. A complete obstetrical history would make my report too long, as it embraces many details of minor importance not necessary to relate in this instance.

Previous history: Patient had had measles and whooping cough.

Examination of urine: Specific gravity, 1022; acid reaction; no sugar; light color and a slight trace of albumen.

Case from day of entrance until time of delivery watched, and frequent hot baths, proper diet and regulation of bowels resorted to. The day previous to delivery patient had done an ordinary day's work (light work, as she was now eight months pregnant), which she had been doing for four weeks around the hospital.

On the night of January 20, 1897, patient retired, not having complained of being sick; in fact, at no time during her stay in the hospital had she even hinted at feeling sick. The next morning, at 7 A. M., patient began to vomit, and complained of violent headache. The nurse very naturally thought patient had eaten something that had disagreed with the stomach, but the vomiting not yielding to treatment, I was called and saw her at 10 A. M. When I arrived nurse reported patient very much worse, and I found her about as follows; Breathing somewhat labored, skin moist, temperature, 100 degrees; pulse, 120; pupils did not react to light readily, and it was with considerable difficulty that patient could be aroused. Immediately introducing catheter I drew off two teaspoonfuls of bloody-colored urine, which, upon testing, was found loaded with albumen, and heat gave a brown coagulated mass. I ordered patient a sweat and an enema. In an hour's consultation with Drs. Zinke and Rowe, the following course was determined upon, they agreeing with me in diagnosis. Delivery of child. The cervix not being dilated over the size of a five-cent piece, I dilated with fingers, applied forceps, delivery of child (lived six days), and placenta. No laceration of consequence. Only a few whiffs of chloroform, which was really not necessary, but merely as a safety valve to a convulsion seizure. Delivery accomplished, patient again removed to hot room and sweated, carefully watching fundus of uterus to prevent any undue hemorrhage. Hypodermics of strychnia, ether, digitalis and whisky given; no improvement followed. The pulse increasing in rapidity, veratrum viride given every hour for four hours with no diminution in pulse rate. The patient being so large and fleshy, bleeding was resorted to, but all to no avail, as she succumbed at 9.15 P. M. From the time stupor supervened twitchings of hands and face constant, but no violent convulsive seizure.

The very interesting feature was the patient's apparently healthy condition four weeks prior to her demise; her ability to do light work, and at no time a complaint—not even a headache. The lesson taught is the great care necessary to a pregnant patient with even a slight trace of albumen in the urine, and at best often our efforts are of no avail.

PRESENTATION OF SPECIMEN.

This specimen was removed at the Good Samaritan Hospital, January 22, in the presence of a class, from Mrs. N., of St. Mary's, Ohio. She is thirty-five years old, mother of three children, the youngest three years old. Present illness has lasted for eighteen months. It began with bloody diarrhea, six months later there was a discharge of pus by the bladder, and three months ago by the rectum. Recently an abscess formed near the crest of the ilium, and was opened by her physician. It is still discharging. At the time of operation there was slight elevation of temperature, pulse 120. I first attempted to drain per vagina, but the abscess was so high in the pelvis and the uterus so immovable I was unable to do so. I then opened the abdomen to see what was to be done, and at once decided that total extirpation of the uterus and appendages was advisable. This I proceeded to do, but had only gotten the uterus freed on one side when my clinic hour expired, and being unable to secure the following one, was compelled to move my patient through the hospital halls and up two stories by the cold elevator. After this delay we finished the operation as rapidly as possible, but the patient left the table much exhausted. She, however, rallied satisfactorily in twelve hours, and so far recovered as to be able to leave the hospital day before yesterday.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

UNNECESSARY STREET NOISES IN AMERICA.

This is the way the average Englishman looks upon the noises of American cities, and with a considerable degree of truth. These things might receive attention from the authorities and in a large measure remedied.

Efforts are being made in New York and in some other large cities in the United States to prevent as far as possible the unnecessary street noises. All over the world street noises in the large towns are a nuisance as well as a serious menace to health. Some of the noise must be endured as a necessary evil, but a great part of it might be easily abolished by judicious legislation and to the lasting benefit of the general public. The worst feature of the case is that it is not only in the day time that the pandemonium is rampant, but at night, too, when the nervous system absolutely requires rest, it is often almost impossible in a large city to obtain undisturbed repose. The matter is a serious one and will sooner or later have to be gravely considered. The noises prevailing by day and night in New York are almost beyond belief. Englishmen are rightly prone to think that London is a noisy place, but compared with New York the American, we believe, looks upon London as a village. The noises in New York have a peculiarly jarring, irritating effect on the nerves; the booming rumble of the cable cars, the metallic rattle of the trains on the elevated railway, the jolting of the carts and heavy traffic over the rough, uneven roadways, the continual sounding of the gongs on the cars, the ringing of the bells attached to hucksters' carts—all these combine to make up an aggregation of sounds which happily can be equaled in no part of London. In all large towns unnecessary street noises of any description should be sternly repressed. It seems absurd in these days of high pressure that to the unavoidable sounds should be added those which might be stamped out without doing harm to anyone.

—Lancet.

TOXINS AND ANTI-TOXINS—A NEW THEORY.

Calmette and Delarde (Ann. de l'Institut Pasteur, x, 12) have reinvestigated the natural and acquired antitoxic properties of blood serum from various animals, taking the reaction to doses of abrin as the most frequent criterion. They have arrived at the following conclusions: (1) The serum of animals naturally refractory to such toxins as they have investigated rarely possesses antitoxic properties with regard to those toxins. Thus, while fowls and tortoises resist very considerable doses of abrin their serum is totally inactive with regard to abrin. Similarly, Vaillard has proved that the fowl, although refractory to tetanus, gives a serum which is without action on tetano-toxin. Even when the serum of refractory animals is antitoxic, as in the case of the ichneumon and the hedgehog with respect to serpents' venom, the antitoxic power is always extremely feeble and by no means in proportion to the degree of immunity. There is thus no relation between the natural refractory condition of certain animals and the antitoxic power of their serums in respect of the toxins by which they are unaffected. (2) While warm-blooded refractory animals can produce anti-toxins under the influence of repeated non-fatal injections of toxins, cold-blooded refractory animals produce none under the same conditions. (3) Cold-blooded refractory animals, such as the frog, can acquire immunity against fatal doses of toxin without their serum becoming antitoxic. (4) Antiabric and antivenomous serums can be used practically for the production of passive immunity in man and animals, and also for the diagnosis of the toxins which they oppose. The former has a very marked preventive action when applied to mucous surfaces, and hence may be turned to account in opthalmology. (5) The active substance of antitoxic serums is not modified by certain chemical reagents, which destroy or profoundly alter the toxins. It does not alter toxins when mixed with them in vitro. It appears to exist in great abundance in the leucocytic protoplasm of vaccinated animals, the leucocytes retaining their antitoxic powers after being thrice washed free from serum. It does not dialyse through membranes; it acts as energetically on the leucocytes of fresh animals as do the antimicrobic serums. (6) Certain substances having no specific action on toxins, such as bouillon, normal ox serum, or the serums of certain animals vaccinated against various infections or intoxications can, when injected into fresh animals, act preventively as regards other infections or intoxications. Hence immunity, natural or acquired, cannot be due to the presence in the serum of a chemical substance having the power of destroying or modifying the toxins. The true existence of a preventive substance in the serum of vaccinated animals remains yet to be proved; the author's experiments suggest that the preventive power may after all be a physical and not a chemical phenomenon. Thus they have shown that the antitoxic function is independent of immunity, since the latter can exist in the absence of the former; further, that both natural and acquired immunity result from a special property of the cells. These, according to the conditions of the surrounding mediums and their own composition, yield passively to the influence of the toxins as a bar of soft iron does to that of a magnet. When these conditions change under diverse external influences, such as the tolerance of certain poisons, the functional state of the cells is modified at the same time. This may be compared to the conversion of the soft iron into steel by tempering; the steel can preserve its magnetization and transmit it temporarily to other bars of soft iron or permanently to other bars of steel. The authors maintain that a similar physical explanation can be offered of the susceptibility or temporary permanent resistance of organisms to infections and intoxications.

CEREBRAL ABSCESSES IN CHILDREN.

At the recent meeting of the American Pediatric Society Dr. Holt gave an account of four cases of this condition which had come under his notice. Details were published in Pediatrics of June 1. The first case was that of a child, aged six weeks, and this has the peculiar interest of being the earliest age at which an intracranial abscess has been described. The child was born easily and naturally, and there was no history of injury or disease. It was a fat, healthy-looking infant, with nothing abnormal until four days before death, when swelling of the left thigh commenced. On admission to hospital the child was found to be almost moribund, with a feeble, almost imperceptible pulse, and a temperature of 99.5 degrees Fahrenheit, but without coma. The thigh was incised, but no pus was found, only disorganized blood. The patient died, and examination of the brain revealed an abscess in the parietal lobe, with some recent local meningitis on the inner surface of the dura mater. The abscess cavity was 7 cm. long and 5 cm. deep, and contained two ounces of pus. The only likely source of infection was from the external ears, each of which had been punctured, and the punctures were found covered with dirty fluid encrusted with pus. The second child was three months old. The symptoms developed acutely—viz., irregular shallow respiration, retracted abdomen and fever. There was also opisthotonos in the last few days and convulsions on the last of all. There was found to be a large abscess of the right parietal lobe, which communicated with the ventricles, and pus was found in the left petrous bone, although there was no discharge from the ear during life. The third patient was also three months old and was said to have been well and strong until seven weeks before, when it fell from the bed on to the floor. Three days later the patient cried out sharply and vomited. On admission to hospital there were emaciation, occasional vomiting and discharge of blood from the left ear. Death took place suddenly, and there were found to be meningitis of the inferior surface of the cerebellum and an abscess as big as a hazel nut. The fourth case was that of a child nine months old. On admission the patient was found to be in excellent condition as regards nutrition, but there were internal strabismus, dilatation and inactivity of pupils to light, and increased knee jerks; there was no fever. Vomiting occurred occasionally, and symptoms of irritation alternated with drowsiness. Gradually rigidity developed in the lower extremities and hands, and there were slight paralysis of the left side of the face and discharge of pus from the ear. The child died in the eighth week of the illness, and at the necropsy two abscesses of considerable size were found in the right lateral lobe of the cerebellum. These did not communicate, and no pus was found in the auditory canal. In conclusion Dr. Hott gives a short account of the different conditions in which cerebral abscess occurs in children. It is rare in the first four years of life, more common later, and the first case referred to is the youngest case recorded.

Electro-Therapeutics

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THE TREATMENT OF ASTHMA BY ELECTRICITY.

Probably few physicians have attempted to treat asthma with any resort to electric currents, although in the early part of this century Philip applied a positive electrode at the back of the neck, a negative over the epogastrium; employed a constant galvanic current (dosage unknown), and gave "decided relief to twenty-two cases."

About thirty years ago Neftel paid considerable attention to the treatment of asthma by a similar method with the positive electrode applied over the pneumogastric in the neck. By lowering the irritability of the pneumogastric he achieved a success which "far surpassed" his own expectations, but was unable to positively assert that idiopathic asthma could be cured (radically cured) by the galvanic current. Writing after some twelve years of experience Neftel concluded that without doubt asthmatic paroxysms can be kept off for an indefinite time, and that every single attack may often be checked. He found, however, that a reverse of the polarity was required in some cases apparently associated with a paralytic condition of the bronchial tubes or with an abnormal reaction of the pneumogastric nerve to the galvanic current.

Others have employed the same method and reported occasional temporary, but not permanent benefit.

Whatever may be the true pathology of asthma, it is certainly held in abeyance during the action of an electric current which has a function regulating action upon the pneumogastric or other nerves. If the asthma was due to no other cause than altered nerve functions, it is theoretically certain that electricity would not only give temporary relief, but would effect a cure.

If the asthma is maintained by a persisting cause a palliative treatment cannot produce a cure until after the cause is removed. In two cases in my own experience the asthma has apparently been reflex from uterine irritation, of which neither the patients nor previous physicians were aware. Both of the cases were young ladies, about twenty years of age, neither of whom had suspected any pelvic lesion.

Case number two was that of a young lady, whose father has been asthmatic for thirty years. About a year ago she began to have severe attacks herself, which differed materially from those of her father. Some things which aggravated him had no effect upon her, and palliatives which gave him relief did not relieve her. After trying a change of location and faithful medical prescribing she reached a point of almost despair; had lost thirty-five pounds, become very anemic, and while in at-

tendance for a month at the office of a specialist, who gave her an inhalation form of treatment, she failed so rapidly as to finally be almost unable to leave her room.

Upon being referred to "electricity" as a last resort (it seems quite natural to try electricity after everything else has failed), she managed with help to reach my office, and I put her on the static platform. She was breathing very rapidly, and had just had a severe paroxysm. Respiration very shallow, and chest full of rales on both sides. During her subsequent treatment I had numerous opportunities to verify the influence of general static electrification in regulating functions. I have counted her respirations as high as sixty per minute before treatment, and had them come down to thirty-six per minute in ten minutes. Positive electrification, with long sittings of about a half hour each, mild positive sparks to the chest and to the spine constituted her static treatment, and she rapidly became able to inflate her lungs deeply without fatigue. Her breathing became almost free from rales during each treatment, and her daily exerbations took on a different character at once. Her exceedingly debilitated state at the commencement improved a little each day for three days. On the fourth day she had a severe relapse, and was up all night. This was the last severe attack she had. It was attributed to a culminating gastric derangement due to drug dosing, to which she had been subjected.

It was ascertained by careful inquiry that she observed some aggravation every month, and had mild dysmenorrhea. Examination showed a lateral displacement of the uterus, with considerable venous engorgement. The cervix was drawn to the right side, and held there by a tough fibrous band. The os was slightly inflamed, patulous and emitted a slight mucous discharge. I considered it probable that the asthma and uterine condition were intimately associated, and during the three weeks prior to her next menstruation she was treated accordingly. She progressed daily, and not only gained in weight and strength, but was entirely free from wheezing most of the time. She also observed that any slight aggravation at night was readily checked by burning a pastille which had before given her very little relief. Her courses came on without her knowing it, and she not only had no pain, but a much freer flow and very much less of the usual increase in the asthma.

She is unable to recollect any illness which could account for the adhesion of the uterus. Probably both the static and galvanic currents act in the same manner in ameliorating the disturbance of respiration, but the favorable result probably depends for its permanency upon removing the disturbing cause. In the two cases above referred to the disturbing cause was evidently uterine, although in the first case no lesion could be made out. The first case had no static electricity whatever or applications to the chest. She was simply treated by galvanic and faradic currents within the pelvis and the asthma abated.

Current Medical Literature.

HEMOPTYSIS.

According to Cotton, the following are the chief causes of hemoptysis: 1. Hemorrhage from the pulmonary artery or its radicles. (a) Rupture or wound of lung from external violence. (b) Active hyperemia of the lungs--inflammatory, vicarious or induced by violent effort or excitement. The active hyperemia may be primary as regards the lungs, or may supervene or be attendant upon disease already present in them. (c) Mechanical hyperemia of the lungs, secondary to heart disease or embolism of one of the pulmonary branches, or to pressure from tumors, such as enlarged bronchial glands. (d) Neurotic division of vessels in the course of softening of tuberculous or other consolidations in destructive lung diseases—phthisis, cancer. (e) Aneurismal dilatation or simple erosion of branches of the pulmonary artery, exposed in the course of excavation of the lung or ulceration of the bronchial mucous membrane. (f) Primary atheroma of the pulmonary artery within the lung. 2. Hemorrhage from the bronchial capillaries. Capillary hemorrhage from the bronchial mucous membrane. 3. Hemorrhage from the aorta or one of its great branches. Aneurism rupturing through the lung or into a bronchus. This classification of the causes of hemoptysis is drawn by Dr. Cotton from his own clinical experience and observations in the dead house.

—Med. Times and Hospital Gazette.

ARTHRITIC GOUT.

Sir Willoughby Wade divides cases of gout appearing in connection with the joints into three classes: First, the acute attack of regular gout; second, chronic gout—possibly a sequel of an acute attack, with much deposit of urates in a solid or semi-liquid state. In this, with more deformity, there is much less pain and tenderness, though along with these redness and superficial swelling may from time to time be superadded with an increase of deposit within the joint. Third, pains referred to the joints of a more or less fugitive character, or tenderness felt chiefly on use, which latter may, if excessive, be followed by increase of pain and even some redness and swelling, or an attack of the first variety. In an attack of gout which has affected the metatarso-phalangeal articulation of the great toe, lines of tenderness can be detected running from the joint across the dorsal and plantar aspects of the foot in the line of the nerves supplying the joint. This nerve affection sometimes has the character of a neuritis and at other times that of a neuralgia, and may, therefore, be described as a neurosis. The lesion may arise from injury or from the presence of some toxic agent in the blood. A neurosis is the primary and essential element. If a sensory nerve is attacked we get pain and tenderness; if a vaso-motor nerve we get redness and swelling; if the nutritive nerve of a joint we get changes in the joint, one result of which may be a deposit of urates. It may be asked how a toxin (uric acid) affects now an internal, now an external, sensory nerve; now a motor, now a vaso-motor; now a trophic nerve, and now an excretory one. This condition causes us to hesitate before we declare positively that gout is dependent upon uric acid as a cause.

—Med. Times and Hospital Gazette.

THE BABY'S BATH.

The hand is an unsafe guide by which to determine the temperature of the water. This should always be determined by the thermometer. A bath thermometer should, therefore, be a part of the equipment of every nursery. This consists of an ordinary thermometer of large size, set in a woden case. The following table shows the proper temperature of the bath for various periods during the first two years:

At birth .....100 degrees F.
During the first month.97 degrees F.
One to six months.....95 degrees F.
Six to twelve months..90 degrees F.
One to two years.....86 degrees F.

—N. A. Practitioner.

DILATION OF THE STOMACH IN INFANCY.

It is well known that dilation of the hollow viscera is a morbid condition commonly gradual in its development and equally, if not more, slow in its amendment. It derives, moreover, a peculiar interest from the fact that it constitutes a form of change which marks the transition between functional and organic disease—a stage at which overwork and weakness of tissue account for the whole pathology, and which is therefore often well within the hope of a healthy revision. Additional light has recently been shed on this subject by a paper published by Dr. Comby in the Journal de Clinique et de Therapeutique Infantiles of July 1, 1897. The writer's observations have been limited to the study of gastric dilation during infancy. He finds that at an age when the newly formed organ might be expected to be fully competent the stomach frequently shows a marked degree of dilation. In 64 children who died in the Hospital for Sick Children, Paris, this viscus was found to be dilated, its volume varying from 200 c. c. to 3100 c. c. In sixteen others it was contracted. Dr. Comby explains the former condition as being due to atony produced by an auto-infection by putrescent matters resulting from an improper diet, the latter as an evidence of the refusal of such food by the child, who is consequently starved. He believes that infantile dilation is by no means always recovered from, and that many cases of a like kind which are discovered only in the adult or the aged have had their true beginning in the earliest months of life. As the best means of treatment besides a suitable diet, he advocates irrigation of the stomach, a catheter being passed along the gullet into the stomach, and this organ repeatedly washed out with fifty or sixty grammes of tepid boiled water or Vichy water. He has never known this method to give rise to any serious inconvenience.

—Lancet.

THE TRANSMISSION OF TUBERCLE.

Jackh has recently worked at the investigation of the question whether the sexual glands or their secretions contain virulent tubercle bacilli. In his inquiry he used the testicles and the contents of the seminal vesicles, as well as the ovaries of tuberculous patients who had died either of chronic pulmonary tuberculosis or of general miliary tuberculosis. Portions of the sexual organs or of the semen were introduced into the abdomen of guinea pigs and rabbits. Of five cases in which portions of the testicle or of semen were injected positive results were obtained, thrice with the semen and once with the testicular substance. All the rabbits remained healthy. Of three injections with ovary one gave a positive result. Examination of the young of tuberculous female guinea pigs gave only one positive result. It appears, therefore, that the semen may contain virulent tubercle bacilli, and that transmission of tubercle from mother to child is not the general rule.

—Med. Times and Hospital Gazette.

THE TREATMENT OF TYPHOID FEVER.

S. Frankel has recently written upon the treatment of typhoid and phthisis by guaiacol-carbonate. Its use in the former disease was first drawn attention to by Dr. Holscher

in 1894, and recently Dr. Eschle has made a very exhaustive study concerning the conditions governing the absorption and excretion of guaiacol and guaiacol-carbonate, at Professor Baumann's laboratory, at Freiburg. The results of the work done upon the subject may be summarized as follows: Both the absorption and the excretion of pure guaiacol occur very rapidly. Guaiacol-carbonate is disassociated and rendered capable of being absorbed only by putrefactive processes under normal conditions, therefore when there is intestinal putrefaction the duration of the excretory process does not differ markedly from that of the pure guaiacol. Hence, and also from the further fact that by the long continued use of guaiacol and guaiacol-carbonate in medicinal doses in man, and even in toxic doses in dogs, the increase of the ethereal sulphuric acid at the expense of the sulphuric acid is constant in amount, there can be no cumulative action of the drug. And guaiacol-carbonate seems to be the more thoroughly used up the smaller and more frequent the doses in which it is given. The explanation of this is to be found in the fact that the administration of large doses interferes with intestinal putrefaction and prevents the decomposition of the carbonate. In phthisis, therefore, Eschle recommends administering a dose of 4 1-2 to 7 1-2 grains of the carbonate four times daily. After very large doses of guaiacol there appears in the urine an organic body of as yet an unknown nature. Hydrochloric acid precipitates it in tough, mucous-like flakes, and it might thus occasion occlusion of the uriniferous tubules and stoppage of the function of the kidneys, thus fatally damaging the organism. This body was never observed when guaiacol-carbonate was administered, proving, as Seifert has already shown, that whilst guaiacol in large doses is poisonous, guaiacal-carbonate is not so. Drs. Hall, Greene, Shields and other physicians of the United States agree that guaiacol-carbonate is most useful in the treatment of typhoid fever. Dr. Greene claims that by its use typhoid is reduced to two periods—first,one of rapid reduction of temperature; second, a period of convalescence. Tympanites, when present, disappears; dry tongue and delirium are prevented; diarrhea ceases; pyrexia stops by the tenth or twelfth day, and the patient at once enters upon a favorable convalescence. The results are probably brought about by both intravascular and intestinal disinfection. The characteristic typhoid stools become more consistent and lose their offensive odor. The smell of creosote can be detected in both the urine and the feces.

—Medical Times and Hospital Gazette.

CHLOROSIS.

An editorial in the British Medical Journal of July 24 on the subject of chlorosis treats of the Lloyd Jones new theory of this disorder, which we reproduce as follows:

"Chlorosis had been studied so long and so exactly that it had passed into the commonplace. But a new method always produces a new theory, so complex is nature, and we so simple, and thus Roy's invention for weighing a drop of blood has given, in Lloyd Jones' hands a new meaning to chlorosis. After examining 1400 healthy persons he has found that in males the specific gravity of the blood rises rapidly from infancy until the age of 17, remains stationary during middle life and falls slightly in old age, while in women it rises until puberty, but falls from that time until the age of 45, and rises from this until old age, when it again falls a little. Persons of fair complexion have lighter blood than those who are dark. The weight of blood varies with the quantity of hemoglobin, and less closely with the number of cells.

"After many researches into natural conditions he turned to disease, and, among others, to chlorosis. This he found to be characterized by a very light blood, containing little hemoglobin and few cells. 'Nothing,' he says, 'is more characteristic of chlorotic blood than extreme diminution of the volume of red blood corpuscles, together with an

equally marked reduction in the amount of hemoglobin.' In this he is at variance with other authorities, for it is usually allowed that the condition referred to is rather that of pernicious anemia, and that in chlorosis the hemoglobin is reduced in far greater proportion than the cells. He obtains his results not by counting the cells, but by measuring their volume after whirling the blood centrifugally, and this method may not compare strictly with the other. This question will have to be re-examined, but that the blood is much lighter than natural is the more important result of his researches, and is antecedently probable if its weight vary with the hemoglobin.

"Chlorosis appears to have some connection with child-bearing, for it is rarely, if ever, seen in men, and closely follows the age of puberty in women. This has long been remarked, but Lloyd Jones' observations on healthy females led him to the conclusion that chlorosis is but an exaggeration of a condition which is natural during the child-bearing period, and which may therefore be considered to have some favorable influence on fertility. During the whole period the blood of women is not only lighter than that of men, but even lighter than that of girls below 14, and the difference is most marked in women between 25 and 35 years

"The idea received a curious confirmation from the statistics of light and dark complexioned persons, which showed a distinctly greater fertility in the families of the former, whose blood we have seen to be the lighter. Lighter blood seems therefore to mean greater fertility, and while all women undergo this change to some extent, chlorotic women carry the tendency to excess. This is the novelty and the interest of Lloyd Jones' research.

"A few cases of primary anemia occur in young men, but these have remarkably heavy blood. From this and one or two other facts he believes that in chlorosis there is an excess of plasma, but that in these heavy-blooded cases the plasma is relatively deficient. He calls this condition 'oligemia,' an old term with a new meaning. But his conclusions are a little weakened in that he allows that the two conditions may be combined. Of these mixed cases we must hear more.

"With these views it is natural that he should hope to explain chlorosis by some auto-intoxication from the generative organs. The ovaries have failed him hitherto, and he is now examining the uterus. He has no difficulty in showing that the stomach and the intestines have not yet been proved guilty. Whether he will have more success with the organ now accused remains to be seen."

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

OPERATIVE TREATMENT OF CHRONIC INFLAMMATION OF THE MIDDLE EAR.

Malherbe (Rev. de Chir., June, 1897) having observed much improvement of hearing after free exposure and scraping of the mastoid antrum and auditory meatus in cases of chronic suppuration of the middle ear, has been led to apply a similar treatment with certain modifications to patients suffering from dry chronic otitis. Five cases are reported in which the results of this treatment proved so satisfactory as to favor the assumption that exposure of the antrum and middle ear is indicated in cases of non-suppurative chronic otitis, which has not been relieved by other means. The main objects of the operation advocated by the author are free exposure of the mastoid antrum, which usually, in cases in which such treatment is indicated, is contracted and surrounded by eburnated bone; and removal by gorge and mallet of the bone between this cavity and the middle ear. Any adhesions that may be found are carefully divided, so that the chain of ossicles may be set free. No attempt, it is stated, should be made to detach the base of the stapes from its normal connections. The following rules have been suggested to the author by the experience hitherto acquired of this treatment: Operative treatment, he holds, should not be attempted on patients of advanced age. In cases in which the operation is indicated it should be performed early, before deafness has become pronounced and subjective noises have increased to such a degree as to be almost intolerable. It would be useless to operate in cases in which there is no longer any cranial perception of sound. One ear only, and that in which the trouble is more severe, should be treated at the first operation. Experience has shown that an operation on one ear may be followed by an improvement on both sides.

THE RISK ATTENDING FORCIBLE CORRECTION OF DISTORTION DUE TO HIP-JOINT DISEASE.

Sainton (Revue d'Orthop., No. 1, 1897) states that in cases of faulty position of the thigh, with complete ankylosis of the hip, osteotomy near the upper extremity of the femur is the safest and most effectual method of treatment. If in cases of distortion and stiffness following hip-joint disease, there be still some movement at the joint, and the displacement and rigidity be due to contraction of muscular and ligamentous structures, the limb may usally be restored to a correct position by simple manipulations whilst the patient is under the influence of an anesthetic. This plan of treatment, however, is held to be a dangerous one by the author, who reports five cases in which, after an apparently successful result death occurred from tuberculous meningitis in the course of two or three months. The relation of the fatal meningitis to the surgical treatment is suggested by the fact that this event occurred in no less than 19 per cent. of 27 cases, in which Kirmisson restored the normal position of a limb distorted after

hip-joint disease by a bloodless and not very forcible procedure. The danger of meningitis and other results of tuberculous infection is due, the author believes, to the breaking up of encysted caseous deposits about the seat of the old articular disease.

OPERATIVE TREATMENT OF EXOPHTHALMIC GOITRE.

Schulz (Berl. Klinik, June, 1897) reports 14 cases of Basedow's disease under the care of Kummell, which were treated by partial removal of the enlarged thyroid body. In most of these cases the symptoms of this disease were very severe, and rendered life almost intolerable. Twelve of these patients, it is stated, were completely cured and enabled to resume their occupations. In the two remaining cases the operation was followed by much improvement, and there is every probability of the exophthalmos, the sole persisting symptom of the disease, disappearing in a short time. There could be no doubt, the author asserts, that each of these 14 patients presented well-marked and very decided symptoms of Basedow's disease. Frequent observation of the patients after operation during intervals varying in the different cases from two to seven years have convinced the author that objections to partial strumectomy on the ground of probable relapse, do not hold good. In one case only was there observed any renewed enlargement of the thyroid. In all the others the remaining portion of the gland showed a tendency to shrink rather than to increase in size.

RESECTION OF THE STERNUM FOR TUMORS.

Keen (Med. and Surg. Reporter, March 27, 1897) reports two cases of successful resection of the sternum for tumor, and adds a table of 17 previously reported cases. The first of the author's cases was one of resection of the manubrium, inner third of the left clavicle and lower third of the left sternomastoid muscle for sarcoma. In the second case —one of carcinoma of the left breast and secondary carcinoma of the sternum at the junction of the manubrium and gladiolus—a considerable portion of the sternum was removed until apparently healthy bone was reached. The patient recovered from this operation, which was a very serious one, as it was necessary to remove at the same time the right breast, together with a layer of the pectoral muscle, but death resulted from recurrence six months later. The prognosis of operative interference in cases of tumor of the sternum, for immediate recovery at least, is good. In one of the 19 cases tabulated by the author the result was not stated; of the remaining 18 four died, a mortality of 22.2 per cent. It is pointed out that in cases of tumor—frequently sarcoma —adhesions to the retro-sternal tissues, and especially to the pleura and pericardium, do not take place until late. These tissues are usually pushed before the disease and the tumor; therefore, if the operation be not delayed too long, it may be separated from them with ease. The chest necessarily becomes narrowed when any large portion of the sternum is resected, but this seems to result in relatively slight inconvenience, either as to respiration or from loss of support of the arm.

FRACTURE OF THE NECK OF THE FEMUR IN CHILDHOOD.

Whitman (Annals of Surgery, June, 1897) reports 10 cases of fracture of the neck of the femur in children between 2 1-2 and 8 years of age, and presents two skiagraphs showing the consequent deformity of the bone at the seat of injury. In the course of his paper the author deals with practical difficulties in connection with this injury, especially its immediate diagnosis, and its differential diagnosis from hip disease during the stage of recovery. It is held that the traditional age limit for fracture of the neck of the femur does not exist, and that this injury not only does occur in childhood, but is probably not an uncommon accident, which may be recog-

nized, or may at a later period be mistaken for and treated on the diagnosis of hip disease. In opposition to the accepted teaching that the symptoms here regarded as those of fracture are due to separation of the epiphysis of the head of the femur, the author holds that it would be rather extreme violence followed by non-union of the fragments or subsequent disability that would favor the diagnosis of the latter form of injury. The less the violence and the less the immediate disability the greater would be the probability of fracture when signs of fracture are present, because a bone is more likely to break in its weakest than in its strongest part, and because rapid union and almost normal functional capacity associated, as was observed in all the author's cases, with upward displacement of the trochanter, prove that the solution of continuity could not have involved the articulating surface of the femur. It is stated that this fracture in childhood is peculiar in the fact that although the immediate results are extremely favorable, even without treatment, the final outcome is likely to be a disability even more decided than after fracture in adult life.

NEW INCISION FOR NEPHRECTOMY.

Abbe (Annals of Surgery, June, 1897) has recently reported to the New York Surgical Society a case of hydro-nephrosis in which the kidney was removed by an unusual method. An incision was made from a point one inch inside the antero-superior iliac spine, upward and backward for four and one-half inches in a line parallel with the fibres of the external oblique muscle. After separation of the fibres of the abdominal muscles, as is done in the McBurney method the peritoneum is freely exposed, and can be readily stripped from the front of the kidney. By using good retractors the surgeon can now inspect the pedicle and separate the ureter, which can be followed to the brim of the pelvis. This method, it is held, allows nephrectomy in the most advantageous position for both patient and operator. It gives free access to the kidney and ureter, and is almost a bloodless method, as no muscles are cut across. As each abdominal muscle is divided in the direction taken by its fibres the deep portions of the wound readily fall together, and there is much less tendency to the development of hernia.

Current Literature in Obstetrics and Gynecology.

EFFECTS OF CAUSTICS ON THE UTERUS.

Labusquiere (Ann. de Gynec. et d'Obstet., June, 1897) reviews the experience of several recent writers. Hofmeyer reports a case where a 50 per cent. solution of chloride of zinc was injected into the uterus. The nozzle of the syringe was very fine, almost as thin as that of a morphine injector, and the os had not been dilated before treatment. The patient walked home, but died with symptoms of acute peritonitis within 12 hours. The body was disinterred for a judicial necropsy 20 days later. There was no doubt strong evidence of peritonitis; the serous investment of the uterus and its serous folds were inflamed. On the other hand, though the endometrium was represented by an eschar, there was no such appearance in either Fallopian tube. Hence the inflammatory process had extended through the uterine wall, whilst none of the fluid caustic had passed along the tubes. Hofmeyer condemns the chloride solution; he even thinks that it acts as a poison. He refers to Duhrssen, who advises its application by means of a Playfair's probe; but Hofmeyer finds that most of the caustic on that instrument is lost on the cervical mucosa; for that reason the advocates of chloride erroneously believe that it can be freely applied to the endomentrium with impunity. A needle-like nozzle should not be recommended for intrauterine injections, as it encourages the evil practice of injecting without preliminary dilatation of the cervix. Much can be injected through a fine nozzle, but that much cannot always escape freely through the os, and the os internum may contract behind it. By dilating the cervix, using a syringe with a fair-sized nozzle, making sure that the fluid can escape from the cervix and keeping the patient in bed, strong caustics may be used with advantage. Brose thinks that even with these precautions intrauterine injections of any fluid may set up perimetritis. Schroeder recorded that complication when only solution of tincture of iodine had been employed. He advises that a Playfair's probe be used for the application of the chloride solution, which in particular should never be injected. In leucorrhea, and even gonorrhea, the cervix should be treated first. Duhrssen, on the other hand, is in favor of the injection of strong caustics, but he insists on washing out the uterus with water both before and after the injection of the caustic. He packs the uterus with iodoform gauze on the day before cauterization, so that the cervix is dilated, and in consequence the action of the caustic will be less painful. Sanger condemns both the 50 per cent. solution of chloride of zinc as injection and Dumontpallier's treatment with crayons of that salt. The chloride is an excellent therapeutic agent, but should be used like nitrite of silver and applied by aid of an ordinary caustic holder. Strong solutions of other salts should be applied in the

same way, but never injected. Labusquiere notes that Worth and others have recently shown that destruction of the endometrium may not necessarily cure even pure endometritis. In a case where after the use of Dumontpallier's crayons the uterus was removed, it was found that in place of the eschar was a perfectly reproduced endometrium. Unfortunately its pathological changes were reproduced as well. Hence much remains to be learned about the rational treatment of endometritis.

LATENT RUPTURE OF UTERUS IN LABOR.

Backer (Monatsschrift f. Geburtsh. u. Gynak., March, 1897) relates the case of a woman in her third labor, who seemed to be doing badly, when it was found that the retardation of delivery was rupture of the uterus. This was surprising, as the symptoms were by no means acute. Five hours after rupture the uterus and appendages were removed. The patient died within eight hours after the operation. At the necropsy the cause of death was found to be hemorrhage. The vascular and edematous pelvic connective tissue had shrunken up, so that the ligature had slipped. It is clear, says Backer, that mass ligatures are insufficient for the hypertrophied and vascular structures around a parturient uterus. Every divided vessel must be secured. The conjugate diameter of the pelvis was 3 7-10 inches.

ETHER VERSUS CHLOROFORM IN OBSTETRICS.

In a paper on "Some Things I Was Not Taught in Obstetrics," E. S. Boland (Boston Med. and Surg. Journal, March 18, 1897) says a few words in praise of chloroform in midwifery practice. Chloroform he uses hundreds of times to once of ether. Boston, he says, justly proud of her great discovery of that great general anesthetic, ether, has not been fair to chloroform. He has not found that it predisposes to hemorrhage. As a routine practice he examines the heart before giving it, and under these restrictions he regards it as an ideal anesthetic during the latter part of the first stage and during all of the second stage of labor; it is seldom necessary during delivery of the afterbirth or for suturing a perineal tear.

TREATMENT OF UNCONTROLABLE VOMITING IN PREGNANCY.

A. Pozzi (Archivio di Ostet. e Ginecol., May and June, 1897) has treated successfully five cases of severe vomiting in pregnancy by the method proposed by Professor Tibone. In four of these the pregnancy had reached two and a half months, in one only a month and a half. The method referred to was the subcutaneous injection in the hypogastrium of a solution of hydrochlorate of cocaine (1 cg. to 1 g. of distilled water). In two of the cases the treatment was begun in the second stage of the vomiting, when there was fever and when cerebral phenomena had begun to manifest themselves. In two cases the cocaine was given when the vomiting was still in the first stage, and in the fifth patient the author had to do rather with an exaggerated form of simple vomiting than with the grave incoercible type. In all the cases a great number of other means of treatment —including in some replacement of the uterus—had been previously tried.

FACE PRESENTATION.

Gessner (Centralbl. f. Gynak., No. 22, 1897) admits that in individual cases no satisfactory explanation of face presentation can be found. Obstetricians should report every case where fair evidence exists that some condition favors this presentation. In one of his own the patient was in her eleventh labor. He detected a spastic stricture in the lower uterine segment, which projected into the uterine cavity so as to hold back the fetal occiput. This spasm was suppressed by narcotics and warm applications, and the presentation was

spontaneously converted into the first vertex position, and delivery followed. This case suggested, in Gessner's opinion, Freund's theory that rheumatism of the uterus is a cause of face presentation. In a second case there was nothing remarkable at the labor; the child was born asphyxiated, and died on the next day. The cranium was markedly dolichocephalic, and the posterior arm of the head lever was nearly a centimetre longer than the anterior. As the deformity was one of the scapho-cephalic variety it must have originated in the course of development in the uterus, and not during the process of labor. The case supports Hecker's theory. In the discussion on Gessner's paper Mullerheim supported Freund's theory. He had seen many cases like Gessner's first at Strassburg, where Freund had detected a relation between rheumatism and abnormal presentations, so much influenced by climate. Nagel and others supported Hecker's theory, having detected deformities of the occiput in face presentation.

TREATMENT OF PUERPERAL SEPSIS.

1. Suspected infection of the birth canal should be confirmed when possible by a bacteriological examination of vaginal secretions, and every means of differentiating from other affections be resorted to, that they may be treated either by medicine or by surgery. 2. Irrigation and antiseptics destroy the nutrition of the parts when continued and, furnishing increased moisture, improve the field for the development of microorganisms, aside from the danger of death resulting from the antiseptic used. 3. The birth canal can be kept comparatively dry by absorbent dressing, removing the culture media and arresting the development of germs and infection until the abraded parts have healed.

—Miller, American Journal of Obstetrics.

MALIGNANT DISEASE OF UTERUS.

1. Cancer of the cervix uteri, if left without surgical interference, always kills. 2. The disease in most instances is primarily a local process. 3. Early hysterectomy will cure quite a percentage of these cases. 4. The microscope, while a great diagnostic aid, is not infallible in its findings. 5. The experienced surgeon is warranted in resorting to hysterectomy, even in doubtful cases. 6. Every malignant gravid uterus should be removed before the disease has advanced beyond the period of a probable cure.

—Cordier, Tri-State Medical Society, Chicago.

Miscellany.

THE TREATMENT OF CHRONIC RHINO-PHARYNGITIS.

R—Menthol i
Oil of sweet almonds, or
Liquid vaseline x
M. S.—Apply locally with a brush.
—Hamon de Fougeray.

ACETANILIDE POISONING IN A NEWLY BORN INFANT.

Irving M. Snow (Arch. of Pediat., June, 1897) has met with a case in which acetanilide crystals applied as an antiseptic to the stump of the umbilical cord caused symptoms of poisoning. About 60 grains were used and two days later (the ninth day of life) the infant became cyanotic, respiration 60, pulse quick and weak. There were no signs of congenital heart disease or of atelectasis pulmonum. The umbilical hollow was found to be filled with acetanilide powder, below which was a dry granulating surface with no signs of inflammation. Oxygen, whisky and digitalis were administered, but for ten hours no improvement took place; after 24 hours, however, the child slowly recovered, the cyanosis having lasted for 72 hours. There was a loss of one pound in the body weight in three days. Snow has collected from literature a number of cases of acetanilide poisoning in young children.

ICHTHYOL IN BLEPHARITIS.

Darier (Clin. Opthalmologique, February 10, 1897) recommends the following ointment for application in cases of blepharitis: Icthyol 0.50 cg., powdered starch 5 g., oxide of zinc 5 g., vaseline 25 g. Its use has to be continued for some time, alternating if necessary with the application of silver nitrate, etc. In bad cases a little pure ichthyol may be smeared on the swollen lid margins at night, the lids being well washed with boric acid lotion in the morning. While ichthyol diminishes congestion it does not seem to diminish the conjunctival secretion, and where this is marked silver nitrate is called for. In rebellious phlyctenular keratitis with much vascularization, Darier has obtained good results by introducing daily a minute portion of pure ichthyol into the conjunctival sac. This causes some smarting, which, however, passes off in about ten minutes.

INTRAVASCULAR INJECTIONS OF SUBLIMATE AND QUININE.

D'Anna (Il Policlinico, March 1, 1897) has been experimenting on dogs, with solutions of sublimate (1 in 100 and 1 in 1000 of NaCl solution) and bichloride of quinine (1 1-2 g. to 2 g. of water). The effects of injecting one or other of these solu-

tions into arteries or veins, against or with the current of blood and also with varying degrees of force, were carefully investigated. With regard to quinine, no matter what the technique or whether it is injected into a vein or an artery, no coagulation takes place. There is no danger in injecting quinine. The case is different with regard to mercury; solutions of sublimate (1 in 100) are absolutely dangerous, 1 in 1000 solutions cause changes in the vessels (thrombi, endothelial destruction, alteration in the muscular coat), which should theoretically cause damage, although clinically the result is not so deleterious. Possibly the results obtained in dogs may differ from those which have been observed in men. Experiments with cyanide of mercury (1 in 1000) gave the same results as those with perchloride.

Book Reviews.

TYPHOID FEVER AND ITS ABORTIVE TREATMENT, BY JOHN ELIOT WOODBRIDGE, M. D.—THE CLEVELAND MEDICAL PUBLISHING CO., NO. 48, THE ARCADE, CLEVELAND, O., PUBLISHERS.

This work, which is the compilation of a number of papers, written by Dr. Woodbridge on the subject of typhoid, and contains the now celebrated "Woodbridge Treatment of Typhoid," comprises 338 pages of the etiology, pathology, symptomatology and new treatment of this disease. We agree that the doctor has, in our estimation, the right idea in the treatment of typhoid; ie., early elimination and disinfection. We fail, however, to see what great amount of importance can be attached to the slight variations of formulas Nos. 1, 2 and 3, or why either of them may not be all that is practically required in attempting to abort the disease. It has always seemed rational to suppose that primarily typhoid is a local infection, and should, within a limited period, be aborted by eliminative and antiseptic treatment. The book is well worth the small price, and full of practical suggestions, whether the treatment will hold fire or not. One thing is certain in all new methods, and that is, no severe criticism should be made without a faithful trial under the specific directions as laid down by the author. If this treatment holds good a great advance has been made by Dr. Woodbridge in medical science.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
20 SEP 97

The Times and Register.

VOL. XXXIV. No. 5. PHILADELPHIA AND BOSTON, SEPTEMBER 4, 1897. WHOLE No. 945.

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Original

THE MEDICAL TREATMENT OF DIPHTHERIA.

BY A. A. NEFE, M. D.,
Lookout Mountain, Tenn.

Whether diphtheria is primarily a local disease or not is still sub-judice.

How and where the Klebs-Loeffler bacillus first finds entrance, thence propagating and disseminating its progeny, the fact remains that in our present state of knowledge its destruction and eradication is the problem presenting for solution.

When this is attained the question of prophylaxis is well-nigh settled.

As the reader is already familiar with the diagnosis and prognosis I need not dwell on them, nor upon the need for prophylaxis and other questions with which we are all familiar, but will call your attention to a plan of treatment which has proven successful in my hands for over 18 years.

In the earlier years of my professional life I was located in a malarious section, where this disease was both endemic and epidemic, and it, like many other diseases, assumed a periodic character. In consequence quinine and calomel entered largely into the treatment, with the result that delirium and exhaustion were produced, to the detriment of the patient, but without producing any amelioration of the disease.

The further treatment consisted in the administration of the tincture of iron, chloral-hydrate, chlorate of potash, sulphurous acid and various other medicaments, with the results we all know but too well.

Whether the anti-toxine treatment will verify its promises after the proprietary element is eliminated or not, the factors of cost and availa-

bility must be taken into consideration.

The treatment which I have pursued has given as low mortality as the antitoxine treatment, showing but five deaths in over 300 cases.

My plan of treating this dread disease, in short, is as follows:

R—Sanguinarina Nit. .....gr. i
Acetum.
Aquae .....aa. fl. oz. ii

M. Sig.—One-half teaspoonful every hour.

Label No. 1.

R—F. E. Hyd. Can.
Ol. Terebinth .....aa. oz. ii
Spts. Vin. Gall.
Aquae .....aa. fl. oz. ii

M. Sig.—One teaspoonful every hour, alternating with No. 1.

Label No. 2. Shake the bottle.

The above doses are for an ordinary 2-year-old child.

The proportions can, of course, be varied to suit the case according as stimulant, antiseptic or expectorant are indicated.

I have in grave cases given the medicines every 15 minutes instead of every half hour as above.

I know of no better internal local antiseptics than vinegar and turpentine, and that they penetrate to every portion of the economy is very evident in the secretions and excretions.

I do not allow any food or drink for a few minutes after either medicine, thus giving opportunity for local action on the throat.

Usually inside of 24 hours the membrane begins to loosen, becoming thicker and easily detached. At this stage an application of papoid comes in play, digesting off the membrane, and to be followed immediately by a dose of either solution, preferably "No. 1," because of a slightly escharotic action.

Above all things do not "swab" the throat nor allow of forcible removal of the membrane, as this only irritates the throat, leaving a fresh point for infection.

As the membrane exfoliates contact with the medicine becomes more painful owing in part to restored sensibility and it becomes necessary to so inform the parents lest they give over their watchfulness or insist on a different line of treatment.

As the throat improves the interval of medication is lengthened, and if at any time fever runs very high a few doses of aconite will be all that is needed in addition to the routine treatment. One thing more as to treatment. Should there be insufficient action from the bowels use enemata, rather than cathartics, as the latter have proven unsuitable in my experience.

I could give records of a great many cases where one or more members of a family had already died and where the thorough and persistent use of this combination of drugs saved others apparently moribund, showing that the question of proper diagnosis does not enter. I have had but three cases of post-diphtheritic paralysis, and but one sudden death, it being due to obstruction, and occurring before I began the use of papoid, which I believe would limit the extension of the disease by its dissolving action.

I would be glad if the members of the profession would give this a thorough trial and report their results through the journals.

As a prophylactic I give a dose three or four times a day, according to the age, and have had no trouble in controlling the spread of the disease, even in poor families where all the members occupied the same room for kitchen, dining room and bedroom.

FORCEPS ROTATION IN OCCIPUT POSTERIOR POSITIONS OF THE VERTEX.*

BY WILLIAM GILLESPIE, M. D. Cincinnati, O.

I recently had the pleasure of coming to your society as a visitor and hearing a paper read by Dr. Stewart on forceps delivery in occiput posterior positions of the vertex. While Dr. Stewart did not advocate forceps rotation, yet several members of the society took occasion to question its advisability. They did not go into the subject, however, sufficiently to state their objections plainly. As I was interested in the subject, had used the forceps several times to accomplish rotation and had been unable to find sufficiently good reasons for discontinuing the practice, I concluded to bring the subject up again, hoping to profit by the discussion. It is stated, on authority that I do not question, that all but 4 per cent. of occiput posterior positions of the vertex will rotate anteriorly if proper flexion is secured and time given for nature to mould the head for her purpose.

In looking up statistics, however, I was struck with the fact that all of them were taken from the older writers, and had been collected at a time when assistance to the parturient woman was never thought of till nature had completely exhausted her resources. I seriously doubt if any prominent obstetrician of the present day can give, from his own experience, the per cent. which nature cannot rotate. Few men would subject a patient to hours or perhaps days of hard labor, and wait till nature had been completely exhausted before extending a helping hand. These statistics, then, are of no value, except to remind us that nature does attempt to rotate, and we should always give her credit for every efficient help. Any careful observer has occasionally seen the occiput rotate anteriorly above the brim, in the cavity of the pelvis, and many times just before the head swoops over the perineum. It can usually be said that so long as the relative size of the child's head and the pelvic canal are not out of proportion, descent occurs naturally, but when resistance is met nature endeavors to overcome the difficulty by rotating, and thus presenting a narrower diameter. This is a very valuable hint from nature as to the proper management of these cases. We shall follow the rule laid down by Simpson in dealing with this subject: "In occiput posterior positions the mechanism of the extraction of the head with forceps should be an exact imitation of the mechanism of the expulsion of the head by nature." No higher law can be laid down, and it needs only to be added, provided we can do this with the least possible danger to the mother and child.

When progress ceases, flexion being perfect, and nature does not seem able to rectify the position without exhaustion, it is our duty to render assistance. There are many ways of doing this, but we are only considering instrumental interference, which is always called in after failure of less active measures. Special care is called for in the application of forceps, and special care in using them after the application is made.

The head should always be grasped by its bi-parietal diameter when possible. This is easily accomplished with the head low in the pelvis, but when high in the cavity it is sometimes impossible. If compelled to grasp the head irregularly the operator should remember two great dangers: First, his hold is necessarily insecure and traction must be made with great care to avoid slipping of the instruments; second, if

*Read before the Obstetrical Society of Cincinnati, February 18, 1897.

the handles are forcibly compressed in order to retain the grasp necessary for forcible traction, there is danger of posterior rotation of the occiput. I once had this experience. The instruments slipping and the case demanding prompt delivery, I compressed the handles forcibly, and one blade grasping the forehead in front and the other the occiput behind the centre of the head, the forceps was converted into two levers and the occiput was rotated into the hollow of the sacrum. I was compelled to perforate before accomplishing delivery.

If the head has become wedged in the cavity of the pelvis, and cannot be dislodged with the hand or vectis, I think it would be wiser to rotate with the forceps than run the risks of slipping and posterior rotation from violent traction and compression. Acting on this belief I succeeded three years ago in delivering a living child after failing to effect elevation with the hand or descent by traction. The patient was a primipara, aged 20, giving birth to a large male child, O. P. P. After making traction as forcibly as I thought safe with an irregular application, I began slowly and without much force to attempt rotation. The head occupying the right oblique diameter with the occiput behind, the left blade was applied to the right side of the forehead, while the right blade secured a hold on the left side of the occiput. Proceeding slowly and with great care, on account of the edges of the blades endangering the soft parts, the head was soon brought into and a little past the transverse diameter. Removing the blades and reapplying them to the opposite oblique diameter, the head was rotated into the second position and delivery was completed. A careful examination with Bim's speculum failed to show any lesion in the vagina. I would not commend this procedure except in cases of extreme difficulty, and only then to one who possesses some little skill and much practice, for it is only by the exercise of great care, and proceeding slowly and without violence, that freedom from danger can be secured.

In most cases, however, the forceps can be applied to the bi-parietal diameter. We then proceed as follows. Pull downward and backward, exercising much greater care than in anterior positions, and continuing the backward traction longer. Even when the forceps grasp the head regularly in these cases, an examination of the child's head reveals the fact that the tips of the blades are applied behind the ears, unless a forceps with excessive pelvic curve is used. As the head from this point back rapidly narrows, and as the distance between the posterior edges of the blades, in most forceps, is greater than that between the anterior, it follows that while the application seems regular, most of the force is exerted by the anterior edge of the blades, and any premature forward move of the handles will cause the posterior edges to plow up the recto-vaginal septum, if the forceps do not lose their hold entirely. Even when great care is used the forceps sometimes slowly slip backward. Therefore, pull slowly and with greater care than in anterior positions, and examine frequently to see that the blades are still in proper position. The downward traction should be continued until the head rests upon the perineum. I usually continue this traction till the perineum is somewhat distended, and if the application has not been regular adjust the forceps to the bi-parietal diameter. The blades are then loosened, and by depressing the handles are made to assume a position more nearly parallel with the long axis of the head. Closing the blades and lifting the handles, you now strongly flex the head and, bringing it down till the perineum bulges violently and the vulva is considerably dilated, you have the head in nature's favorite position for rotating. Grasp the forceps with one hand near the head and, making that a fixed point, slowly and without force move the handles in the arc of a circle, to the mother's left in O. R. and P., to her right in O. L. and P. No force is required for this rotation; after the movement is once started it requires to be resisted rather than assisted.

You may now leave the case to nature or reapply the forceps, but I have usually delivered the head with the forceps in the reversed position. This is accomplished by grasping the forceps with the right hand, near the vulva, and with the handles resting under forearm, lift the head over the perineum, assisting or restraining its advance, while with the left hand I shell out the head. During the rotation and extraction the blades are in exact contact with the head, and no danger is run of cutting the mother with projecting edges.

It is a close imitation of nature's method of delivering these cases, and thus complies with the law quoted from Simpson. It remains to be seen whether we have accomplished it with the least possible danger to mother and child. The principal objection given by writers on obstetrics, so far as the child is concerned, is danger of fatally twisting the spinal cord. When we come to consider the large number of cases delivered this way by nature's unaided efforts, and by abdominal palpation demonstrate that the body of the child does not follow the head in its rotation, and yet no harm result to the child, the thought presents itself, why should artificial rotation, if carefully executed, be more dangerous than natural rotation? We have positive proof, however, that this fear is more theoretical than practical in the experiments of Tarnier. "From the experiments on many cadavers of newborn infants I have proved that when the head is twisted one-half the circumference, the shoulders being fixed, the motion does not alone occur at the atloaxoid joint, but throughout the whole of the cervical, and a portion of the dorsal vertebra, twisting spirally. In order to make the head thus rotate great force must be used, and yet careful dissection has failed to reveal the slightest lesions in the membranes or the spinal marrow. But it may be said if the vertebrae are twisted the spinal cord must be compressed. To guard against this objection, I substituted for the cord a fluid column, connected with an external glass tube. Every compression of the canal caused the fluid to rise in the tube, and yet torsion of the head did not," etc. I think these experiments prove conclusively that danger from injury to the spinal cord as a result of forceps rotation is purely imaginary. I would ascribe a much more serious effect to the prolonged and severe flexion necessary for nature to successfully deliver these cases. I have seen several cases of convulsions in the newborn, which I felt sure were due to cerebral appoplexy as a result of prolonged and violent flexion.

As we have considered that proper flexion has been secured before resort to forceps, it will not be necessary to consider forceps in the reversed position, as recommended by Richardson, of Boston.

The alternative usually recommended in place of forceps rotation is delivering the head face to pubes.

Grandin and Jarman, in their work on "Obstetric Surgery," advise that as soon as the forehead comes under the pubes the handles of the forceps should be depressed and the head forcibly extended until the forehead escapes. Then with the forceps, or with two fingers in the rectum, the head is raised over the perineum. This is a violent procedure, and, they add, "the perineum is almost certainly torn, and should be repaired at once." They say that later it is hard to resist the temptation to rotate, but we have only to remember the risks the mother would run from such a procedure and resist the temptation. As their procedure is so sure to cause serious laceration, I can hardly conceive of more serious results occurring from rotation with the head in this position.

Pajot many years ago proposed a procedure differing from the above in that instead of producing extension as a first step, violent flexion was secured and the occiput raised over the perineum. The neck then becoming the fixed point, with the perineum as fulcrum, extension completed delivery. This violent flexion by bringing the soft top of the head against the pubes might endanger the cranial contents, and Charpentier, in commenting on it, says it almost certainly produces laceration

of the perineum, and he therefore prefers to rotate with forceps when possible. That some cases can be delivered in this position without damage I do not doubt. I have myself seen four unaided deliveries in which no tear took place—three in multiparae who had been previously torn in one primipara with large vulva and very lax pelvic floor.

As the cases when I have used forceps as above described have shown no larger per cent. of lacerations than anterior positions, I have continued to follow the practice rather than follow established rule and do plastic surgery. As the danger to the child from torsion of the spinal column seems to be proven by Tarnier's experiments to be in the imaginations of those who fear it, I have laid it aside until at least I find as good reasons for accepting the theory, as I now have for rejecting it.

(For Discussion See Last Issue.)

A REPORT OF TWO CASES OF PUERPERAL CONVULSIONS TREATED WITH LARGE DOSES OF MORPHINE HYPODERMICALLY.*

BY JAMES FRANKLIN HEADY,
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The presentation of the following cases of puerperal eclampsia is to illustrate that form due to increased nervous tension and reflex nervous irritability, not well understood at present.

It is true that convulsions due to this cause are less frequent and more benign than those described by Braun as uremic. In fact, this author doubts that you have eclampsia from any other cause than a nephritic lesion. But I want to be understood in the beginning that what I have to say has nothing to do in any way with eclampsia from kidney lesions.

In the first case we have demonstrated plainly that trauma to the nervous system before labor commences can and does produce convulsions during labor.

The second as fully proves that in proper subjects—that is, neurotic ones—the trauma may take place during the time of labor.

CASE I.

C. E., aged 19, married, primipara, well developed and nourished. Has been perfectly well during pregnancy. No edema of the feet and legs or any other part of the body. A normal quantity of urine had been excreted during the latter months of pregnancy so far as could be ascertained.

On the night of December 8, 1890, a general fight occurred in her house and, although she did not take part, it greatly excited her. The next morning at 6 o'clock labor commenced. At 9 she had a convulsion. This was repeated at 10.15 and 11, after which I first saw her. Pulse 100, temperature 101 degrees, very restless. Two ounces of clear urine were secured by catheter and tested for albumen with heat, the only means at hand. None present. Upon vaginal examination the os uteri was found dilated to the size of a silver dollar, soft and dilatable. Vertex presentation, right occipito-anterior position, membranes intact. At 11.30 she had a fourth convulsion, which lasted five minutes, during which the membranes ruptured. Under chloroform the os uteri was forcibly dilated and a well developed male child delivered by podalic version. The child was dead. The anesthetic was removed, and at

*Read before the Obstetrical Society of Cincinnati, February 18, 1897.

12.30 another convulsion, more severe than the last, commenced. She was restless before this began, but did not regain consciousness. Pulse 140, temperature 104 degrees, and at the end of the convulsion coma was profound. One grain of morphia was given hypodermically. In 30 minutes she became restless, but had no eclamptic seizure. At 3 P. M. the pulse was 130, temperature 103 degrees, respirations 10, at 6 P. M. very restless, pulse 124, temperature 102 degrees, respirations 14; still unconscious. One-half grain of morphia given hypodermically.

December 10, 6 A. M.—Pulse 120, temperature 102 degrees, respirations 18; can be aroused, but does not answer questions rationally, and swallows with some difficulty. Hypodermics of whisky and digitalin were given. At 3 P. M., pulse 118, temperature 101 degrees, respirations 20; has taken nourishment and answers questions intelligently. From this time she made an uneventful convalescence.

August, 1893, she had a normal labor, being delivered of a healthy child before my arrival.

CASE II.

M. R., aged 22, married, primipara, well developed and nourished, but of a high nervous temperament. Urine examined frequently during the latter weeks of pregnancy. No albumen or casts were found at any time. The daily quantity varied between 36 and 40 ounces; specific gravity 1018 to 1024. No edema of the feet and legs or any other part of the body. None of the pallor you have in kidney lesions.

Labor commenced August 10, 1893, at 8 P. M. Uterine contractions feeble and occurring every half hour. Vaginal examination shows os uteri dilated enough to admit the index finger; not dilatable; the vertex presenting at the pelvic brim. The position could not be recognized.

August 11, 12 M. Os uteri dilated to the size of a silver dollar, but quite tense; very little advance; with difficulty the position was made out to be left occipito-anterior. Uterine contractions still feeble, occurring every 20 minutes. At 6 P. M. the os uteri was fully dilated, uterine contractions every five minutes and of good character. The head was pressing against the perineum, which was dilatable. Every indication pointed to a speedy and satisfactory termination of the labor. Without a single premonitory symptom a convulsion occurred, lasting about eight minutes. On the cessation of the clonic convulsions, under surgical anesthesia, the forceps were applied and a living, well-developed female child delivered. Believing the cause of eclamptic seizures removed, the administration of chloroform was discontinued. At 7 P. M. a second convulsion commenced, which lasted ten minutes, followed by profound coma. Pulse 120, temperature 103 degrees, respirations 40, deeply cyanosed. One-half grain of morphia given hypodermically. At 10 P. M. the pulse was 120, temperature 104 degrees, respirations 14; slightly restless when a third seizure began. This was the hardest and longest I have ever seen. Life seemed extinct, but, with artificial respiration, elevating her feet and irritation of the fauces, respiration was finally re-established. The pulse was too rapid and feeble to be counted, temperature 105 degrees, respirations 30, comatose and deeply cyanosed. One grain of morphia given hypodermically.

August 12, 2 A. M. Pulse 160, temperature 104 degrees, respirations 12, full and easy. At 4 A. M. the pulse was 130, temperature 103 degrees, respirations 6. She was now perfectly conscious, and answered questions intelligently, notwithstanding the extreme effect of the morphia upon the respiration. It is the only case of this kind I have ever seen from use of opium, a respiration of 6, and yet respond correctly to any question and disturbed by any noise about the house. At 10 A. M. the pulse was 120, temperature 100 degrees, respirations 14. Takes nourishment and is improved in every way.

August 13, A. M.—Pulse 100, temperature 99 degrees. After this nothing of moment occurred, and she made a good recovery.

Denman, in his work on "Midwifery," 1802, relates a case similar to the first one here given: "The carriage of a lady who was going on a party of pleasure was broken down. She was near the time of lying-in and was very much frightened, though she received no apparent injury. When she fell into labor this was preceded by convulsions, in which she died undelivered."

Bard's "Theory and Practice of Midwifery," 1819, cites this case: "A lady in great distress for the loss of her husband and child complained to her physician of an unnatural motion in her arms. Suspecting this might depend on the state of the uterus he examined and found the os tincae considerably dilated. A second physician was called, and while they were consulting in another room they were suddenly called to the patient, whom they found in a fit of puerperal convulsions, which continued until she died."

Dewees gives an example of the second case here narrated in his "System of Midwifery," 1839. A lady raving had a tedious labor. When the head was upon the perineum, with every prospect of an early termination of labor, without any warning, a convulsion commenced.

It is not always easy to differentiate puerperal convulsions of purely nervous origin from the uremic variety. Also they may bear some resemblance to hysterical convulsions. We must bear in mind that other causes entirely divorced from pregnancy produce convulsions; briefly, epilepsy, apoplexy, meningitis, strychnine poisoning and some others. In epilepsy you have the history, and then they seldom occur during labor, though the patient is a subject. In strychnine poisoning you have the convulsive seizures, but not the coma. In apoplexy the pupils are unequal, the hemiplegia usually can be recognized; pulse hard and slow. In hysterical convulsions the pupils respond to light, no frothing at the mouth and no cyanosis. The most important is to exclude uremic convulsions. In the latter form you have a decreased excretion of urine, edema of the legs or general dropsy; albumen in the urine, with casts, both granular and hyaline. You also have great restlessness before the first seizure, severe pain in the head and epigastrium, nausea and sometimes vomiting. While in convulsions due to trauma to the nervous system we have an absence of all these except headache, which is sometimes present.

There has not been a uniformity of opinion as to the best treatment to be employed in these cases. Early in the century—indeed, until in the fifties—bleeding seemed to be the one treatment. Nature was left to complete delivery, or the woman die undelivered. It is true some, while the child was at the pelvic brim, delivered by the feet, and more used the forceps when the child presented an outlet. Some advised hot baths; some cold water dashed in the face; none employed opium in large doses, if at all, so far as I know.

The treatment here employed relates to eclampsia from increased nervous tension and reflex nervous irritability developed during labor. The contents of the uterus demand immediate delivery. If the child at the pelvic brim, by podalic version; if well down in the pelvic cavity, the forceps should be used. An immediate delivery of the placenta. When the seizures are severe and close together, say 30 to 60 minutes, a full dose of morphia hypodermically, not less than one grain; and when the convulsions are slight and far apart, two to three hours, the patient entirely regains consciousness between the seizures, one-half grain will often be quite enough. I am free to confess that the first time I employed a grain dose of morphia it was more with an idea of euthanasia than cure. All other treatment is symptomatic.

(For Discussion See Last Issue.)

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

TUMORS, BENIGN AND MALIGNANT.

One of the greatest difficulties in dealing with the subject of oncology is in endeavoring to draw the line between those growths or degeneration of tissue which are per se, malignant and those which are innocent.

Very few leading authors are in accord on this side of the topic, and when we come to critically examine the question it is readily understood why so much confusion prevails and must necessarily remain. Some have undertaken to establish a nosological division on an anatomical basis; others on the primitive cellular elements, and others again give a dominant position to the clinical features. The greatest perplexity arises from the mixed character of many new formations, in which it may be sometimes difficult to determine whether there be a predominance of simple hyperplasia, medullary, embryonic corpuscles, adenomatous, papillary buds or a typical epithelia.

But there is a localized swelling; is there a tumor? That feature will be dealt with later, as the question is one much easier asked than answered. Very many tumors, some of the greatest source of distress and fatal in their effects in their anatomical elements, are entirely benign in their integral composition. An illustration now occurs to me—the case of a gentleman under my care at the present time with a large, firm, pulsating tumor in each poplitical space, double aneurism. These are both progressing in volume and have already reduced so much pressure and rigidity of the limbs as to render locomotion exceedingly difficult. No doubt in a young and vigorous subject the proper course of treatment would be a clean and complete dissection of them, but this lesion is not met with in the sound subject, as a rule. My patient's age, with renal and cardiac complications, preclude surgery. But these tumors, though histologically innocuous, are nevertheless in time going to cut short his life.

The same may be said of uterine fibroids, which consist essentially of simple, smooth muscle fibre, with often an excess of myomatous elements, the so-called edematous.

These, except when intrauterine, seldom undergo any degenerative changes, yet their volume may interfere with or entirely suppress the function of important organs, and they induce mechanical compression or obstruction in time and under operative interference imperative.

Lipomata, or fatty growths, are regarded as practically harmless, ex-

cept for the great volume which they may sometimes attain, but several cases are on record wherein they have given rise to grave disturbances, or even caused death, as when they are lodged within the pericardium or the spinal cord, in the midiastinal spaces in the mesentery, or in close proximity to any of the vital organs.

Tumors springing from bone in situations where free play is needed for the great nerve trunk or large vessels, may induce the most distressing neuralgias or vascular stenosis. An instance illustrating this came under my notice some time since, in which the axillary plexus was caught and crowded down onto the upper surface of the first rib by an exostosis, springing from the under surface of the outer third of the clavicle. Papillomata and adonomata are, primarily at least, always benign, but when these growths—always of diminutive volume—spring up on the surface of hollow or canular passages they offer a mechanical impediment to the circulation through them, and thus not infrequently give rise to very grave disturbances. The tumifaction of simple or suppurative inflammation affords us another illustration of the serious consequences occasionally attendant on pus formation, when its localized position imparts to it some of the features of a "tumor."

Some years ago I was requested to tracheotonize an infant for stenosis of the larynx.

The history of the case, as well as the peculiar quality of the respiratory sounds, lead me to suspect that the case was not, as supposed, membranous croup. On examination over the surface of the larynx, down close to and on the left side of the crecoid cartilage, I came on a firm mass, about the size of a cherry. It was noticed that when this was pressed upon the infant gave expression to pain. Over this a free incision was made, when a considerable quantity of pus escaped and all the urgent symptoms appeared. Bags of pus, when well walled in by a thick pyogenic membrane, are certainly not often attended with danger to life, though their position at times may cause compression of hollow organs and impede function.

The above are but a few of the many tumors or tumoid conditions which, though essentially benign in their primitive constituents, are nevertheless sometimes attended with many clinical features suggestive of malignancy.

PULMONARY TUBERCULOSIS.

Favorable Climatic Conditions Essential to Its Successful Treatment.

BY JOSEPH R. CLAUSEN,
A. M., M. D.

However much they may differ as to the primitive causes leading up to it, all accepted medical authorities recognize the fact that pulmonary tuberculosis, or, as it is commonly termed, consumption, is due to the presence of micro-organisms known as tubercle bacilli, and that these are greatly, if not wholly, dependent upon climatic conditions for their development, and the consequent development of the disease. This being the case, all honest medical authorities admit that, unaided by climatic conditions unfavorable to the development and propagation of this lowly organism, the disease cannot be cured.

This much admitted, it becomes a question of serious moment to the consumptive where he shall go to be cured.

Various localities have, with greater or less foundation, laid claim to possessing such a climate. In the past, Colorado and Southern California appeared to offer most in support of this claim, and for years they were the Mecca to which consump-

tives all over the world have gone in quest of life and health. Experience has shown, however, that only in certain developments of the disease can the sufferer who goes there hope for relief, much less cure; while in other and more serious phases thereof the climate of both these localities is almost fatal in its effect.

Seriously the subject has been studied, and tirelessly the vast domain of our country searched for a spot where all the climatic conditions were favorable to the cure of this dread disease.

Nor has the effort been in vain.

Such a spot has been found.

It is located in the pine-clad hills of North Carolina.

With a temperature made equable by the warming and unchanging influence of the Gulf Stream, that closely hugs its shores; high enough above the lowlands to insure pure, dry, highly ozonized atmosphere, the life-giving qualities of which are intensified by the healing aroma of its mighty pines, this spot is a veritable "Well of Siloam," where the angel of health is ever present.

Climatologists and bacteriologists, supported by the highest medical authorities in this country, unite in claiming for this locality all the conditions essential to the speedy relief and ultimate recovery of the consumptive who places himself under the healing influences of its charmed climate before it is too late, and experience has proved beyond question the correctness of their conclusions.

In the most favorable locality of this most favorable locality, easy of access by railroad, has been built a settlement called Southern Pines, a settlement that has steadily grown with the growing fame of the locality, till now it presents all the attractions and possesses all the conveniences and comforts of the average health resort, without any of the drawbacks too often found thereat.

In unreservedly committing "The Medical Times and Register" to an unqualified indorsement of this place as a resort for consumptives we do so supported by a weight of actual experience, of medical testimony and of scientific foundation that would render a failure to so indorse it little short of a culpable act on our part.

In discharging our duty as a medical journal we scarcely deem it necessary to remind the profession of theirs. We feel assured of their full support in the position we have taken, and that they will be rightly influenced by the obligation resting on every conscientious physician to employ every means offered by nature or science in the cure of a disease likely to terminate fatally.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

THE FREE HOSPITAL AND THE DISPENSARY QUESTION.

From all sides just at present we gather that the whole medical profession of America and Europe is stirred on the subject, not only of the free treatment of the masses in hospitals and dispensaries, but what has become a much greater abuse, the pay treatment in similar institutions. Indeed, from the present outlook, with the ever-growing number of special hospitals, dispensaries and sanitaria in every city and every town of any consequence in the United States, it would seem that the general practitioner is threatened with early extinction.

Centralize, specialize and monopolize is the watchword. The mammoth modern emporia have in all our larger cities crushed out of existence practically all the small shopkeepers and seriously encroached on all branches of the retail trade, not excepting pharmacy. Corporate bodies of physicians, often under the cloak of charity, have now so swept the field that anything like a comfortable independence in general practice is becoming every year more and more difficult.

It has been remarked that there must be "something rotten in Denmark," that there must be treachery or sharp practices in our own ranks or some subtle influences at work among the laity and the public which must be unearthed and exposed, that unity of action must be promoted, evils eradicated and wrongs redressed.

But what is the remedy; or is there one? Many are pessimistic enough to deny that there is any. They will tell us that much of the present condition of things is dependent on the great operation of economic influences which just now are felt in every industry and occupation; that the people have come to realize that medicine has a certain cash value and they are free to purchase it as they wish of the cheapest dealer. This assertion is not without abundant support, as we realize from the

late action of the large infirmary of Coventry, in England, where at a late meeting it was boldly proclaimed that "it was no charity at all;" that the subscribers and their families had paid for what they got—"something like 3 or 4 cents a year each." And over here, where the writer now is, in the British Isles, for some unimportant annual contribution of a few pounds to the support of certain hospitals from shipbuilders, breweries, factories, etc., the hospital staff must attend promptly all their injured or ill help without the remotest thought of any financial remuneration.

Much, no doubt, may be hoped for through the concerted action of the medical profession, but can we depend on it? From past experience it must be confessed that little can be hoped for from this source. There are too many interests concerned; the sense of self preservation and self aggrandizement is yet too deeply rooted in human nature, and after all, and above all crafts, doctors can agree on nothing. A sense of distrust and suspicion is all pervading and an inherent lethargy weighs down the unselfish efforts of the sincere and the zealous. Nevertheless, in spite of all this, in New York, by the organization of the Medical League its organizers and promoters have already boldly clutched the throat of bogus charity. They have called the attention of the State and the entire country to the subject and every appropriation from the city and State this year for anything other than public pauper institutions will be fiercely opposed.

There is no use of mincing words, the time has come for action—prudent, united and uncompromising action.

This winter promises to be a stormy one in medical bodies. They will be the battleground where backsliders will be forced to show their hands, and plenty of elbow room will be demanded by the fearless champions of reform.

Let us then and there shake off the chains and smite the foe, throttle the code-shouting hypocrites, unmask their double dealings and teach them that the time has come when right has triumphed and the profession has been finally moved to protect its own interests without the aid of those who would rob it of its means of existence.

This must be done, else it will be vastly more honorable to resort to open quackery, to medical Nihilism or anarchy.

This is plain language, but the "Times and Register" is ruled by no despot and is bound to fearlessly defend the great body of general practitioners by whom in the past it has been generously supported.

SOME MENTAL ASPECTS OF MUSIC.

At a recent meeting of the Medico-Psychological Society of Great Britain and Ireland at Newcastle-on-Tyne, Dr. Hayes Newington discussed the subject of the mental aspects of music reported in the British Medical Journal.

He said that the term "music" was dangerously diffusive, many misunderstandings being made possible unless it was appropriately qualified for the purpose of scientific discussion. In spite of the present tendency to localization there could be no part nor function of the brain apparatus specially put on one side for the purpose of music. The reception, cognition and execution of music was carried on by just those departments of the brain which were responsible in other matters, the variation in effect being caused by the variation in stimulus and purpose. In one respect music stood alone—in the number and complexity of impressions thrown on the

brain simultaneously. In the case of the organist the ear and eye received and the hands, fingers and feet acted upon such an enormous mass of impressions that a large amount of reflex action must be aroused, the higher brain not being called upon to interfere in every detail. Cases were quoted in which successful reading and execution of music took place in the evident absence of the power of thought. The psychological processes of singing and playing were described at some length. On the passive side, music had but little power to provoke directly specialized emotion, though it freely produced broad emotional states—for example, contentment or unrest. On the other hand, emotion might entirely arouse the influence of music, association, memorial and other, had to be carefully guarded against in estimating the power of music, which was far more efficient as a carrier than as a manufacturer of emotion. Sense gratification was undoubtedly the foundation of the influence of music, and it could be marked off as apart from intellectual satisfaction; though esthetic cultivation, by increasing the demands of the ear, might obscure the dividing line. The independent existence of sense gratification explained the interest often taken in music by idiots and persons of low mental development. The average man required something more in the shape of form, order and intention. These were supplied by time-rate, volume, timbre, rhythm, etc. Of these rhythm was far the more important. Man lived by it, his brain was preserved by it from the wear and tear which would be necessitated by a constant reference to the higher centres for fresh directions. Rhythm was equally necessary to the reception of sensations as to the carrying out of action, as the stress in everything active or passive came back to one point—the brain itself. Man naturally walked in rhythm for ordinary purposes, but when he desired relaxation he broke rhythm to suit his fancy, and thus were developed marches, dances, etc. He then constructed music to follow these developments. The music, when performed, suggested in its turn motion to the listener. Motion was the very essence of music, since it, unlike painting, which caused its effect by contrast of present stationary contrasts, depended on contrasts between the present and the past. In the creation of incitation to motion and in the aid it gave to the orderly carrying out of action lay the chief power of music.

DEATHS FROM CHLOROFORM.

As appears quite usual, an account is given of a death under chloroform in the last issue of the British Medical Journal. But the circumstances of this one are quite unique, for most deaths from this cause are sudden.

The patient, a boy aged 11, was admitted into the hospital suffering from a dislocation of the proximal phalanx of the thumb of five weeks' standing, for which reduction had been unsuccessfully attempted without an anesthetic. It was decided to give chloroform, for which the boy was carefully prepared. The heart was examined and found to be normal, and there was nothing to call attention to the condition of the other organs. The administration was begun at 11 A. M. on July 21, the chloroform being dropped into a Skinner's inhaler held at a little distance from the face. The patient took the anesthetic very well for several minutes, when he retched once or twice, for which he was turned on the side, but as nothing was vomited the anesthesia was proceeded with. Whilst semi-conscious the thumb was being examined by the surgeon, when the

boy had a convulsive seizure, and the breath was held for a few seconds, so that he became cyanosed. This condition rapidly passed off, the breathing was resumed and more chloroform administered for a short space, until he was suddenly noticed to become very pale, with shallow breathing. The administration was stopped at once and the patient inverted, causing an immediate return of color and improvement in the breathing. This, however, was only temporary, so artificial respiration was resorted to, hypodermic injections of brandy, strychnine and nitroglycerine being given and sinapisms applied. In spite of all efforts the pulse became weaker and weaker and ceased altogether about an hour after stopping the anesthetic. Artificial respiration was persisted in for about two hours. The chloroform, of which about half an ounce was used, was made by Duncan & Flockhart. The bottle had been opened some little time, but an analysis of the remainder showed no impurity to be present. No post-mortem examination was ordered.

Book Reviews.

TWENTIETH CENTURY PRACTICE. An international encyclopedia of modern medical science. By leading authorities of Europe and America. Edited by Thomas L. Stedman, M. D., New York City. In 20 volumes. Volume XI, "Diseases of the Nervous System." New York. William Wood & Co. 1897.

Another installment of this exhaustive work has been issued from the press of the publishers, which continues the subject of "Nervous Diseases." This volume is one which will be greatly appreciated by the subscribers, for this class of maladies is becoming greater and greater every year. The work opens with an article on "Diseases of the Cerebrospinal and Sympathetic Nerves," by Dr. James Henrie Lloyd, of Philadelphia, who treats of the physiology and pathology of the nerves before taking up the special pairs and their disorders. The article is very exhaustive and excellent. "Trophoneurosis," by Dr. Charles K. Mills and F. X. Dercum, of Philadelphia, forms two articles of worth on atrophy, scleroderma and acromegaly, with numerous illustrations.

"Diseases of the Spinal Cord" forms a chapter by Drs. L. Bruns, of Hanover, and F. Windscheid, of Leipsic, which is well worth the price of the whole volume.

"Tabes Dorsalis" is treated by Dr. P. J. Mobius, of Leipsic, in a thorough and masterly manner, and "The Combined System Diseases of the Spinal Cord," by Dr. Adolph Strumpell, forms the closing chapter of this volume. Physicians in ordinary general practice know too little about these diseases of the nervous system, and these volumes offer to them an excellent chance to post up on all classes of these disorders. It is a veritable school for instruction from the best writers in the land.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

THE TREATMENT OF LARYNGEAL TUBERCULOSIS WITH CUPRIC INTERSTITIAL CATAPHORESIS, WITH REPORT OF CASES.

One of the gravest diseases that demands the attention of the laryngologist is tuberculosis of the larynx. The gravity of this affection lies not only in the fact that the disease itself is intrinsically of a most serious nature, but also that it is usually a complication of pulmonary tuberculosis. The patient has, therefore, little of the vital resistance necessary to battle against the encroachment of the tuberculous disease in the larynx, this condition being aggravated by the fact that the parts are continually reinfected by the tuberculous expectorations from the lungs.

The treatment of this grave affection has long claimed the attention of laryngologists, especially since the means of laryngoscopic examinations have been perfected, but in the majority of cases the prognosis was so grave that but little hope of a cure has been entertained in the majority of cases. The methods of treatment, both medical and operative, are large in number, and this very fact would seem to indicate the lack of confidence in any individual method.

The application of the electro-cautery to the larynx requires great manipulative skill, and some of the most prominent writers have advised against its application in this region. While this is not my individual opinion, as I have frequently had satisfactory results from its use, still I fully appreciate the difficulty attending its application.

In seeking a treatment for laryngeal tuberculosis my desire has been to select a method which would be conservative, not especially difficult to carry out and, if possible, applicable in all cases of this disease. It should not be painful, should be followed by little or no reaction, should be devoid of hemorrhage and should not expose the parts to reinfection from the tuberculous expectorations.

The application of electricity for the passage of medicaments into the tissues, or cataphoresis, has received a great deal of attention in the past four or five years, and it has been practicaly and scientifically demonstrated that certain medicines may be carried into the tissues by the action of the galvanic current. This is due to the affinity of the poles for certain substances, or, more accurately speaking, the repulsion of these substances, which tends to drive the medicine to the opposite pole, just as the positively electrified substance will repel the negatively electrified pith ball. This method has already been used for some years for the treatment of goitre in the cataphoric

application of iodine, and, while the results in this treatment have not been very satisfactory, I believe this

to be due not so much to the inefficiency of the iodine as to the fact that the method has not been scientifically applied.

In the treatment of laryngeal tuberculosis with cataphoresis, we have a method of saturating the diseased tissues with such medicaments as will neutralize the infectious character of the disease, and which will at the same time stimulate the tissues to a healthy reaction.

In my investigations with the treatment of laryngeal tuberculosis by cataphoresis, I have tried a variety of substances, especially creosote, guaiacol, iodine, chloride of zinc and the oxychloride of copper. Creosote I abandoned after a few trials, as it proved to be too irritating to the tissues and caused too much pain and reaction after the application. Iodine I found useful, but not so efficacious as the oxychloride of copper, and guaiacol, which is really creosote deprived of its irritating properties, I found very useful and especially applicable in cases in which there was considerable pain, as its application was usually followed by marked diminution of the pain, and this effect frequently lasted 24 hours after the application. I therefore still make use of guaiacol when the relief of pain is the principal object. Cocaine may also be used in this connection, but its effects are too transient and the systemic effects are not well tolerated by the tuberculous patient.

In the oxychloride of copper we have a salt possessing marked germicidal properties, while exerting at the same time a stimulating effect on the pathological tissues, which is very superior to any other medicament which I have used in this treatment. Its microbicidal properties are not so strong as those of the chloride of zinc, but the latter I found to be too corrosive and irritating to be recommended in this disease, although I have found it of special value in the application of cataphoresis to malignant neoplasms in this and other regions.

The cataphoric application of oxychloride of copper has already been used in ozena, and the results in this obstinate disease have been unusually satisfactory. In the application of this method to laryngeal tuberculosis I selected spherical electrodes of pure copper, one-eighth to one-fourth inch in diameter, applied to the diseased areas by means of an insulated handle, and have found these efficient for the cataphoric process, and when properly applied not giving rise to pain, irritation or reaction after the application. It is of great importance that only pure copper should be used in this method. Commercial copper contains zinc in its composition, and I found this to be especially irritating in this treatment. Pure copper obtained by electrolysis is to be preferred.

The galvanic current only can be used in this method, as the faradic and alternating currents possess no cataphoric properties. Weak currents should be used at all times, and I have rarely found more than five milliamperes necessary and have frequently used much less. A rheostat should always be used, so that the current may be admitted and reduced without pain. The copper electrode must be connected with the positive pole, and the negative pole connected with a large dispersing electrode applied to the nape of the neck.

The throat should first be sprayed with a 5 per cent. solution of cocaine or eucaine, although I have found in several of my cases that after a few applications have been made the anesthetic was no longer necessary. The applications should be made every second day, as a rule, although the physician must be governed by the strength of the patient and other circumstances in the number and interval of the applications. These applications should be continued until the parts resume their normal condition, or until the conditions no longer justify the exertion of the patient necessary for the application.

I have found the use of direct laryngoscopy or autoscopy, as described by Kirstein, of special value in this treatment. This method, in which the laryngeal mirror is dispensed with and the tongue pressed downward and forward by means of a special depressor, and the head the body of the patient are placed

in such a position that the eye of the examiner is in a line with the tracheo-laryngeal axis, is a very useful addition to the methods of our specialty. Unfortunately it is not applicable in all cases, and the irritability of the throat of most tuberculous patients makes it still less so in this class of patients. The pathological processes of laryngeal tuberculosis are usually in the posterior part of the larynx, which are the most easily seen and reached by this method, so that it very much facilitates the cataphoric method of treating this disease.

When direct laryngoscopy is used the electrode, instead of being bent in the usual angle for the larynx, is straight, with a slight downward flexion only at the end of the electrode. The applications are then made directly without the aid of the laryngeal mirror.

When the copper electrodes are applied to the tissues, the decomposition of the copper takes place, giving rise to the oxychloride of copper, which passes into the tissues toward the dispersing electrode. It is important when the applications are made that the electrode be slightly rotated, or moved about, so as to avoid the adhesion of the electrodes to the tissues, which would give rise to an abrasion which it is desirable to avoid. When an adhesion has taken place the circuit should be slowly broken with the rheostat, the current reserved by means of a polarity charger, and a light current passed in the opposite direction for a few minutes. The electrode may then be easily removed without laceration of the tissues.

The advantages which I have found in the method of applying cupric electrolysis in the treatment of laryngeal tuberculosis are as follows:

1. There is no real destruction of the tissues, and there are no lacerations of the surfaces which might form a point of entrance for new pathogenic germs for reinfection, as is the case with the method of curettage, and, to a certain extent, also with the galvano-cautery and simple electrolysis. The cure is effected by the healthy reaction of the tissues in the same manner in which we often see specific lesions heal when the system is under the influence of mercurials.

2. In the cases which I have treated by this method there has been absolutely no reaction or hemorrhage following the application—a point of great importance with tuberculous patients.

3. This method does not demand the high degree of manipulative skill required for curettage, or for the manipulation of the electro-cautery in the larynx and is especially simple when direct laryngoscopy can be used.

4. This method is applicable in all cases of laryngeal tuberculosis.

In concluding this communication I will give the clinical history of three cases which I have treated by this method with satisfactory results. I have attempted this treatment in a number of other cases, but discontinued it either because the pulmonary disease was so far advanced that the efforts of the patient in undergoing the treatment were not advisable, or on account of too great irritability of the throat of the patient.

In the first case the patient suffered from tuberculous laryngitis complicating tuberculosis of the lung. There was marked infiltration of the arytenoid region, with incipient ulceration of the interarytenoid commissure. In this case the cataphoric treatment was at once instituted, and after seven applications at intervals of three days the case had improved so much that the patient was permitted to go to the mountains for the benefit of his lungs. The infiltration had very much diminished, especially over the left arytenoid, where only a small amount was still visible. After six weeks' absence the patient returned, with the tuberculous disease of the lungs much aggravated, but the laryngeal condition was but slightly changed, in that the infiltration was somewhat more noticeable, and there were no ulcerations visible in any part. The patient subsequently succumbed to tuberculosis of the lungs, but the treatment had relieved him of all

the pain and irritation attending the progress of the laryngeal complication.

In the second case, also complicated by severe pulmonary tuberculosis, the tuberculous lesions were more decided in character, the ulcerations having extended over a considerable portion of the right ventricular band, and both vocal cords being involved. In this case the granulations were reduced, the ulcerations healed and the infiltration was somewhat diminished, when the application had to be discontinued on account of the weakness of the patient, who subsequently succumbed to tuberculosis of the lungs.

The third patient had suffered for seven months from tuberculous laryngitis, but tuberculosis of the lung was entirely absent, or it could not be detected by the most careful physical examination. The sputum showed the tubercle bacilli, which were found only after repeated examinations. The patient weighed 110 pounds, was so weak that he could walk only when supported, suffered from constant irritation of the throat which gave rise to a hacking cough, and deglutition was so painful that he could swallow only with the greatest difficulty. There was no history of any specific infection, nor were there any physical evidences of such a condition. The arytenoid region was much infiltrated, with extensive ulceration of the interarytenoid fold, which extended to the left over the ventricular band. The epiglottis was tumefied with an ulceration of the left anterior portion. The anemia, infiltration and ulceration presented a typical image of laryngeal tuberculosis. The patient could speak only in whispers, and the pain in deglutition was so severe that he subsisted only on liquids, and even these he could now swallow only with difficulty. The patient had been treated by several physicians without success, one of whom had used antiphthisin, but with no apparent benefit. The cataphoric treatment was at once commenced, at first being applied every third day and afterward twice weekly. Improvement was noted after the third application, and after the ninth the ulcerations had healed so far that the patient could swallow semi-solid food with but little pain. After the eleventh application the ulcerations had entirely healed, so that the patient could not take solid food without pain or difficulty, and he at once improved in strength and appearance. The applications were continued twice weekly, and the infiltration gradually receded, and eight weeks later had entirely disappeared. The voice, which at first had been entirely lost, gradually improved, and at the end of the treatment was restored, only a slight huskiness persisting. His weight had advanced to 136 pounds, and he was able to resume his regular business occupation. I saw this patient six months after the treatment, and his larynx showed no return of the laryngeal disease, and his health was excellent.

—Medical Record.

Clinical Medicine.

In charge of Dr. J. J. Morrissey.

COMMON SENSE IN TREATMENT OF CHILDREN'S DISEASES.

The principles of common sense which should actuate the treatment of disease in general can never be more fitly applied than in dealing with children. Our knowledge of their ailments is mainly objective, and where a floodlight of experience may perfectly illuminate the field of observation in the case of an adult, with children our methods are of a different character. And it is mainly in the very simplicity of our treatment that success chiefly lies. The indications presented are not very often apt to be of a complex character, nor do they require complex medication.

It is at this season of the year that each sick child requires to be treated upon individual indications presented, and not upon any prearranged methods that seemingly embrace every case brought before the physician. One child drinks milk with avidity and appears to possess a stomach capable of digesting any quantity without the slightest disturbance of the digestive functions; another turns with abhorrence from the very sight of the stable nourishment of childhood, and if its use is persisted in the child is soon reduced to a condition of marasmus, for the functions of the stomach are kept in a condition of irritation, in which the ingestion of large quantities of milk form the fuel which keeps the fire in a constant blaze.

The same may be said of the highly lauded, artificial preparations of what yesterday should have known, food which are constantly being placed upon the market. It is a very difficult matter to select just the particular preparation which will meet the indications in one particular case. On child's meat is another's poison, and the old saw has never had such special efficacy as when applied to children's diseases. We will swear allegiance to one preparation, and find that in a few cases it works charmingly, and we fondly imagine we have at last found a panacea for infantile feeding. Suddenly we are brought up with a halt, all our fond illusions are dispelled, and our former praise is converted into condemnation. It is not the fault of the food, it is more apt to be the internal economy of the child, which refuses to digest what it does not find suitable for absorption. No two children look alike externally, and it may be a safe proposition to make that internally, too, there are differences of composition. Dissimilarity is not at all confined to features.

When we are called upon to treat children during this heated term afflicted with various digestive disturbances, what are we to offer them in lieu of the elaborately prepared concoctions which philanthropic business men offer us. Herein are displayed the common sense, the judgment and scientific accuracy if you will of the experienced physician. If we could only pass our experience one to another what an excellent currency it would make, but as experience teaches us to-morrow as the world is constituted, each man will have to delve for himself in the mine of humanity.

The simpler the preparations the better. Egg albumen forms one of the least unirritating forms of nourishment that can be given to a child suffering from a disturbed stomach. Mutton when carefully prepared, cut into minute pieces, carefully stripped of any fat and allowed to stand in a Mason jar that has been rendered inoccuous by repeated cleansing, then filled with boiled water, allowing this to stand next to the ice for an hour, then to simmer on the stove for another hour or two —this makes an excellent form of nutriment, and when properly seasoned will be eagerly taken by the little sufferer. If given at infrequent intervals in order that the capacity of the stomach may not be successively taxed, mutton broth thus prepared is far better than any artificially made food upon the market. Barley broth, too, may be given in small doses, and frequently. It is not the quantity of these articles, but rather the quality that we should seek. Frequently they will check vomiting when medicine is of no avail, and the foul-smelling stools will assume a different character and a normal appearance.

In those cases of gastric trouble followed by intestinal fermentation the writer, from a medicinal point of view, has found two remedies to be of great assistance, namely, calomel and carbolic acid. The latter drug given, say to a child a year old, in doses of an eighth to a quarter grain in a teaspoonful of cinnamon water every hour is a most reliable remedy, and will be found to be an excellent substitute for washing out the stomach, a performance which a child looks upon with dread and suspicion. Calomel given in minute doses until its characteristic effect is produced is one of the stable remedies of the pharmacopoeia, known to all physicians. Where the diarrhea still persists, but of a different character, after a few doses of calomel or gray powder, beta naphthol bismuth is of great efficacy and may safely be used in much larger doses than advocated, as it is well nigh inoccuous so far as poisonous effects are produced.

It will not be necessary to use opium as often as it is prescribed, if these remedies combined with thorough washing of the lower alimentary tract are combined judiciously and the food brought within the sphere of the limited activity of the child's stomach.

—J. J. Morrissey, A. M., M. D.

ORTHOPEDICS

In Charge of Dr. E. A. Tracy.

THE SURGICAL THERAPY OF CLUB FOOT.

BY DR. PHOCAS, OF LILLE.

Translation by Dr. Tracy.

A point which is worthy of note is the unanimity of authors upon the treatment of club foot in the newborn. Thus, as has been remarked by Professor Ollier, all surgeons are in accord in forbidding bloody operations on the newborn and in treating club foot at this age by forcible manual reduction. This reduction, done properly, constitutes a real operation, and differs much from the tenotomy pure and simple of the tendon of Achilles done by our predecessors. The moderns practice tenotomy or not, according to the indications, use the aparatus applied only for retention of the parts, and attach the greatest importance to the careful and patient reduction of the tarsal bones.

By aid of the manipulations that Lorenz has systematized and which others have practiced before him, the correction of the deformity is attempted by a forcible unfolding of the loins of the tarsus, and by maintaining them in an overcrowded position for some considerable time. Then apparatus is applied to maintain the foot in its new position and to allow the foot to consolidate by growth into its new conformation. Thus is practiced upon the cartilaginous and flexible bones of the infant a forcible massage, which shapes the bones into a form near to the normal.

Tenotomy of the tendon of Achilles is practiced if needful to get the desired correction of the deformity. In this we have to deal with a real bone operation, harmless at this age and adapted to the pathological-anatomical condition of club foot. This deformity, being boney in its origin, it is rational to attack the bones for its effacement.

Forcible manual reduction is the best operation for club foot in the newborn. It must be done early, not necessarily at birth, but as soon as the child is thoroughly viable. As for all deformities it is useless and dangerous to submit an infant to surgical intervention, unless we are assured there is normal increase of bodily weight taking place. Faithful to these precepts I have often practiced this early correction, and with but a rare repapse.

HIP ABSCESS.

The treatment of hip abscess has in times past caused much discussion as to the proper method of procedure, and in all probability this discussion will continue until our knowledge about certain things is more exact.

Various methods are advocated, one writer favoring non-interference, even to the point of allowing nature to open the abscess; another urging operation as soon as pus has been found to be present. Others would aspirate with and without the injection of iodoform emulsion.

These abscesses may appear at any time during the disease, but they usually come in the later stages, and the particular conditions existing modify the treatment for each case. Tuberculous material being slowly formed at the focus of the disease gradually works its way along the path of least resistance and is collected at the most favorable point in a sac, which is formed around it.

The formation of this material continues for a length of time and we have no means of knowing when it ceases.

If an abscess be opened while this material is being formed of course it is impossible to expect the healing process to obliterate the abscess cavity, consequently to obtain the ideal result a sufficient length of time must elapse for all the fluid to form and collect. This particular time it is impossible to know, but each individual judgment will arrive at a time when it seems proper to go ahead.

The important things to remember in the operation are:

1. To make an incision as long as the abscess so that all tuberculous material may with certainty be removed.

2. The wound should be completely closed without drainage, and a dressing and bandage applied, which will give a great deal of compression. I have applied compression bandages when for the first few hours the return circulation has been interfered with and so much pain caused that an opiate was necessary. The opiate was given rather than loosen the bandage.

3. All bandages tend to work loose, so that a readjustment may be necessary every two or three days.

4. On the third or fourth day, in many, if not the majority of the cases, even when compression has been pushed to the limit, there will be noticed a very slight fluctuation directly along the line of incision. The temperature may or may not rise a very little (99 degrees to 99.2 degrees or 99.3 degrees). With the smallest probe a pin-hole opening should be made at the lowest end of the wound, and it will be found that a small amount of pure serum can be expressed. An aseptic dressing with compression bandage should be reapplied. This may or may not have to be repeated.

This procedure seems to be of the utmost importance, as in cases where it is not done the serum changes to pus and the opportunity for an ideal result is forever lost.

This treatment would be of no avail in cases with extensive disease of bone and the process active, but in those abscesses coming in the late stages when the hip is apparently doing well and under the conditions as previously outlined, the results are very satisfactory.

—Frank E. Peckham, Atlantic Medical Weekly.

ORTHOPEDICS FOR THE GENERAL PRACTITIONER.

CHAPTER II.
THE TREATMENT OF HIP-JOINT DISEASES (INCIPIENT).

BY EDWARD A. TRACY, BOSTON.

I have already given the essential clinical features in the diagnosis of incipient hip-joint disease. The disease being recognized must be treated from the beginning efficiently, for untreated the course of the disease can be severe, abscesses forming and discharging through various channels above and below the level of the joint, great deformity occurring. Amyloid disease of the liver and kidney, in consequence of the long continued suppuration, lung phthisis following that of the joint, and death to end the scenes of suffering and care that can hardly be surpassed by any disease afflicting humanity. This was the common sequel of the disease prior to the treatment inaugurated by Henry G. Davis, an American practitioner with a mechanical turn of mind. Davis devised a hip splint which tended to pull the femur from the acetabulum. Davis believed that by its use he produced separation of the synovial surfaces, and that this was the essential requisite for cure. It is very doubtful if such separation can practically be produced by extension, and the efficiency of the Davis and all hip splints depends upon the fixation of the joint produced by their use. The essential element of the treatment of incipient hip-joint is fixation. A laborious, uncomfortable and out-of-date method of getting fixation is by means of plaster of Paris. It is advocated in the text books at present in use and probably will be for some time to come. Text books are invaluable to the medical historian, but the practitioner to keep abreast of his times must read the journals more and refer to his text books less. The method of hip-joint fixation which I advocate is that described in a paper read before the surgical section of the American Medical Association, at the Baltimore meeting. Wood fibre splint material is used. This material is not surpassed for lightness, durability and efficiency. The splint can be removed and the joint examined at any time. It is sufficient to remove it every two weeks, so that the skin can be cleansed. Upon reapplying it the bandages can be rolled snugly, and thus atrophy of the limb does not interfere with the fixation produced by the splint. This cannot be said of plaster of Paris treatment. I shall quote a description of the splint from the paper referred to above.

A HIP SPLINT.

"This splint furnishes a ready method for obtaining an efficient fixation of the hip joint without the extraneous aid of blacksmithing or special tools. A pattern should be cut so as to extend from an inch or two below the axilla to about the same distance below the knee. The posterior border of the pattern commencing at the upper border should follow near to the spinal column, and over the buttock down the posterior and inner surface of the thigh to the inferior border of the pattern below the knee. The anterior border of the pattern commencing at the superior border below the level of the axilla, should pass over the chest and belly near the middle line of the body, striking off below the umbilicus to cross the lower third of Poupart's ligament and down the inner surface of the thigh to end at the inferior border below the knee. Following the pattern for a guide the splint blank should be cut from a sheet of the material having a thickness of 2 mm. This splint blank should be moistened, moulded and bandaged over the limb. Another blank should now be cut from a sheet of thinner material, and it should be

moistened in like manner and moulded over the other one, so as to serve as a reinforcement. The two forms should be laid together as one, with a layer of liquid glue between them and applied as one to the limb. While moulding this splint the patient should be laid on his back with the limb extended in a line with the body. The moistened blank should be bent so as to embrace the affected thigh and side, and moulded over the parts by means of a roller bandage. This splint should be properly bandaged to the body if we desire the maximum of hip fixation. This is done by taking a few tight turns around the hips with the roller bandage and then bringing the roller down so as to embrace, in figure 8 style, the upper portion of the affected thigh and the opposite hip. A bandage should then be applied from the lowest portion of the splint, embracing first the knee and thigh, then the hips and finally the chest. The bandaging can be prevented from slipping by pinning together the layers of bandage where they overlap.

It needs but a little consideration to understand the thorough fixation produced by this splint when correctly applied. A cursory examination will show that adduction, abduction, extension and flexion and their combination, circumduction, are out of the question with this splint in position. It is left only to consider the remaining motion of the hip joint—rotation. It is prevented by the grasp which the splint maintains on the knee, and also by its forward pressure on the great trochanter. The trochanter, it will be remembered, swings backward in an arc on outward rotation of the thigh."

Besides this splint it is essential that the child be kept up and about and in the open air as much as possible. A pair of crutches and a raised sole (for the shoe of the opposite foot) are necessary. Nutritious diet must be given. If anemia be present give an assimilable iron tonic. A teaspoonful of cod liver oil after meals is good.

In cases of incipient hip disease where deformity is present, due to muscular spasm, it must be reduced before applying the splint. It can be reduced by employing the method advised by Marsh, and in the "Times and Register" of July 10 last.

Treating incipient tubercular disease of the joint in the manner advised, cure can be expected in from one to two years. No other apparatus is essential for the cure.

In the next chapter I shall treat of tubercular knee-joint disease.

Current Medical Literature.

APHASIA.

Karl Bok (Festschr. des Stuttgart, aerztl. Verein, 1897) mentions that the prognosis depends on the site and nature of the lesion. Incurable lesions may preclude improvement even in the slighter cases of aphasia. Extensive progressive lesions are, of course, worse than circumscribed ones. Hemorrhage, embolism, thrombosis, include the majority of cases of aphasia. If death does not occur, even the worst disturbances of speech may be recovered from; whilst, on the other hand, even slight affections of speech may persist throughout the remainder of life. Age is an important factor. Children may learn to speak again even after extensive damage to the speech centres, whereas small lesions in old people may produce a lasting aphasia. The individual power of learning undoubtedly plays a part in the result. The longer the aphasia has lasted without any tendency to improvement, the worse the prognosis, and this is also the case where the intelligence steadily fails. In the didactic treatment of aphasia it must be taken into account whether the

lesion is capable of recovery, whether it has progressed slowly or quickly, and whether the intelligence is involved. It is well to let some time elapse before commencing the treatment, if it is to be ascertained whether the result is due to the treatment. The kind of aphasia, whether motor, sensory or amnesic, must also be taken into account. The object of treatment is to restore the conduction of impulses along the usual paths or to open up new paths. The treatment of amnesic aphasia lies in a strengthening of the defective recollection of words. The words must be learnt by heart and then short reading exercises adopted. Then exercises should be performed in front of a mirror, in order to recall the recollection of the necessary movements. In motor aphasia other parts of the brain may take on function. Single sounds, then syllables, and lastly words, are taught. Writing exercises with the left hand should be performed along with the articulation exercises. The patient should be taught to form words from printed letters. The treatment of sensory aphasia is more difficult. The first attempts are made by means of written language. Lip reading should be developed, and reading, writing and other exercises combined with it. The case may be much complicated by a combination of different forms of aphasia. Much patience is needed. The results so far encourage further efforts. In the absence of complete recovery a considerable improvement may be obtained.

THE PROGNOSTIC VALUE OF URINARY CHLORIDES.

Maignan has recently published a series of observations on the quantitative estimation of urinary chlorides in chronic diseases (Journ. de Med., April 10, 1897). In health an adult excretes 10 to 15 grammes of chloride of sodium per diem. In certain diseased conditions this figure may fall to 3, or even none, and the author made a special series of observations on the quantity excreted in tuberculosis, and found that the figures varied from 2.5 to 3.5 grammes, but the same thing may be found in chronic gastritis, gastric ulcer or gastric carcinoma,and in certain acute conditions, such as pneumonia or broncho-pneumonia. As regards acute diseases the reduction of chloride is of no prognostic value and may even be compared to that reduction found in copious diarrhea or under certain dietetic conditions, and the diminution is often in proportion to the intensity of the disease. It is therefore quite different in chronic diseases, and the progressive diminution of chlorides (when unconnected with special diet) is often of grave prognosis.

HYSTERIA IN THE MALE.

A. Vogt (Norsk Mag. f. Laegevidensk., No. 1, 1897) reports the case of a workingman, aged 42, suddenly attacked by paralysis of the left side of the body, which later extended to the whole of that side. There was no sign of syphilis. The condition lasted for four months without much change. There was polyuria. There was anesthesia of the left side and paresis of both upper and lower limbs. The left testicle was hyperesthetic and there were hyperesthetic spots on the left side of the back. There was diminution of hearing and sight on the left side. On the right there was nothing abnormal. Purely suggestive treatment without any drugs effected a complete cure.

CYCLIC HEMATURIA OF CHILDHOOD.

This condition is described by Durante, Journ. de Med., April 10, 1897). Hematuria ir childhood has been observed several times, but has usually been merely a symptom. In some cases which came under the author's observation nothing but hematuria could be discovered, and no cause could be ascertained. His patients were children, and two possibilities were considered—tubercle and malignant growth. No evidence of tubercle could be found after very continued observation. In the same manner malignant growth was set aside in time, for this condition, as is

well known, is rapid in children; whereas in the cases under observation no evidence of growth could be found at the end of two years, and the author therefore naturally concludes that it could not be present. Both these hypotheses had therefore to be eliminated. No other defect could be found, and thus, by a process of elimination Durante came to the conclusion that the only explanation was a simple or idiopathic renal hemorrhage analogous to epistaxis. He suggests the idea that the defect consists in a developmental defect in the capillary walls.

THE SPECIFIC ACTION OF QUININE IN MALARIA.

Dr. E. C. Register, editor of the Charlotte Medical Journal, read a paper with this title before the North Carolina Medical Society.

After many years of study, both clinical and microscopical, the Doctor arrives at the following conclusion in reference to the specific action of quinine in the continued forms of malarial fever. He says a malarial fever without complications will subside after the plasmodia of malaria disappears from the blood; that we have in quinine the means to completely eradicate malarial poison from the body; that malarial fever occurring in a previously healthy subject, and in the central United States, if at once recognized and properly treated, never ends in death; that it is speedily curable, never continues, provided the nature of the disease be recognized and appropriate treatment employed.

Dr. Register has made microscopical examinations of the blood of several hundred patients suffering with remittent malarial fever, and has studied closely and thoroughly the crescentic and ring-shaped bodies which he says are the forms of the parasite which is responsible for the continued types of this fever, and he finds that the reason quinine does not always effect these irregular forms of the poison is on account of the usual defects in its administration. He contends that the drug is very imperfectly absorbed when given by the stomach, and when the patient has a temperature of over 102 degrees. He says that in cases of continued malarial fever, if distinct and well marked intermissions of the fever are produced artificially by the use of antipyrine, antifebrine and phenacetine, the crescentic and ring-shaped bodies will disappear after the administration of quinine as quickly as the spherical bodies that are found in an ordinary case of intermittent fever. In reference to the belief that the forms of the parasite that inhabit the blood cells are not acted on by quinine he says: "There is no doubt in my mind that this belief is not erroneous. Besides my own observations I have been able to collect the opinions of 32 authors touching upon this point, and 28 out of the 32 believe that the endo-globular or intra-corpuscular forms are not, on this account, the cause of an uncontrollable fever, and that its proximity to the blood cells does not in any way protect it from the action of quinine."

—St. Louis Medical Era.

PURULENT CYSTITIS.

In the treatment of cases of cystitis the internal administration of drugs which have the power of preventing decomposition of the urine is generally recommended, especially in that large class of patients where irrigation of the bladder with antiseptic solutions cannot be efficiently carried out. Salol has been extensively employed for this purpose, but according to Dr. P. Harmonic (Wien. Klin, Rundschau, N. Y. Med. Jour.) a still more satisfactory drug is Lycetol, which he has tried in 16 cases of purulent cystitis. He observed that this drug exerted a very favorable action on the suppuration, and retarded the decomposition of the urine. In gonorrhea he also found it serviceable in the acute stage, and in six cases rapid improvement occurred under its use. In a case of stricture, of which the only symptom was a slight non-purulent discharge occurring in a neurasthenic patient, it caused the disappearance of the discharge in a most unexpected manner.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

CANCER AND "MORBUS MISERIAE."

BY W. ROGER WILLIAMS,
F. R. C. S.,
Formerly Surgical Registrar, Middlesex Hospital.

In most modern text books on gynecology reference is made to the alleged greater prevalence of cancer among the poor and ill nourished than among those more fortunately circumstanced.

This doctrine has lately received its apotheosis at the hands of Dr. Sinclair, who says: "Cancer of the uterus is most frequently met with in the lower ranks of the people of all countries. So marked is the difference of incidence that it might be reasonably affirmed that if we could place all the lower orders, who suffer from privation and depressing environment,for a generation or two, in a position of the more favored we should stamp out cancer. . . . . My experience is that cancer of the portio and cervix occur only among the working classes, the apparent exceptions are so few that they are hardly worth discussing."

Such knowledge and experience as I have of the disease being totally opposed to this doctrine, I would urge the following considerations against its acceptance:

1. During the last half century the wealth of the country has more than doubled, its pauperism has diminished more than one-half, crime has declined, sanitary conditions have greatly improved, the mortality from zymotic, tubercular and many other diseases has markedly diminished, wages have gone up, while the prices of most commodities have fallen to an extraordinary extent; the consumption of meat per head has more than doubled, having reached the amazing total of 126 pounds per year. The bulk of the people are better paid, better housed and better fed than they ever have been before.

In short, just such conditions have prevailed as, Dr. Sinclair alleges, are necessary to stamp out cancer, but instead of having decreased during this period the cancer mortality has more than quadrupled, the uterus participating in due proportion.

2. The Registrar General's reports show that the cancer mortality is lowest where the conditions of life are hardest, the surroundings the most squalid, the density of population greatest, tubercle mortality highest, the general mortality highest and where sanitation is least perfect—in short, among the industrial classes in our great towns, whereas among the wealthy and well-to-do and among the agricultural community, there the cancer mortality is highest.

The only part of the United Kingdom that has remained comparatively unprogressive during the last half century is Ireland, and it is only in Ireland that there has been no great increase in the cancer mortality.

As an indication in the same direction reference may be made to the experience of those engaged in prisons, workhouses and lunatic asylums, which is to the effect that cancer is comparatively rare among the inmates of such institutions.

Of like import is the great prevalency of cancer in civilized communities, whereas among savages it is almost unknown. In the animal world it is only among the domesticated varieties that malignant or other tumors are met with; in a state of nature such diseases are unknown.

3. The ensemble of the facts collected by me relative to the life history of cancer patients shows that they have almost invariably led regular, sober and industrious lives. Persons of drunken and dissolute habits are comparatively seldom affected.

Of 160 uterine cancer patients under my observation not a single one —so far as I could ascertain—had ever been addicted to prostitution, and, what is still more remarkable, only one presented undoubted signs of having had syphilis. The marked fecundity of uterine cancer patients, the rarity of sterility and abortion, point in the same direction, for such conditions are of frequent occurrence in prostitutes and in the syphilitic.

Such considerations as the foregoing seem to me to negative the doctrine of cancer being "morbus miserre;" they indicate undue prevalency of the disease among the well-to-do and easy-going, who habitually eat more than is good for them.

—Medical Press and Circular, July 7, 1897.

Note by the Editor.—Notwithstanding that much has lately been written on the greater spread of cancer in our time, it is more or less a question whether this assumption has any substantial foundation, for the reason that of late years very many pathological conditions are being stamped "malignant" by the microscopist which formerly went by other names. This is notoriously the case in gynecology. Morphological degeneration of the endometrium with adenomatous imitations, with the scraping are often set down as calling for early extirpation. The same applies to other areas, so that on the whole the probabilities are that it is little more than a "false alarm." It is certainly a mistake to assume that cancer is a malady of the poor alone. T. H. M.

MURPHY'S BUTTON AND ITS USE IN GERMANY.

Opinions are divided in this country as to the advantage to be derived from the use of Murphy's button. However, in Germany the appliance seems to be extensively employed. At the last meeting of the German Surgical Society, Czerny referred to 55 recent cases in which he had used it. In 35 of these the anastomosis was between the stomach and intestine; in three between the gall-bladder and intestine, and in the remainder it was wholly intestinal. Twenty-nine of the patients were suffering from malignant stenosis. The average time at which the button was passed was 12 days, the earliest being eight days and the latest 45. Of the 328 cases thus far recorded of the use of Murphy's button stricture of the intestine has only occurred in three. These facts are of much interest, but it is doubtful whether any statements of the kind will have any effect in breaking down the prejudice which exists in certain quarters against the useful appliance under discussion.

—Med. Press and Circular, July 14, '97.

Note by Editor.—Murphy's button every surgeon must concede as one of the very greatest surgical achievements of the age. Everywhere, in particular the great hospitals of Europe, will we see the button occupying a prominent place in the surgical armamentarium; nevertheless, when it is possible to dispense with it and every other apparatus and depend on the suture alone in effecting anastomosis we will have better results.

Effective anastomosis with the suture, however, requires considerable practice. In the hands of the inexperienced Murphy's device is much the safest. T. H. M.

THE SURGICAL TREATMENT OF GASTRIC ULCER.

Leube (Centralbl. fur Chirurgie, No. 28, 1897), at the last Congress of the Deutscher Gesellschaft fur Chirurgie, extolled the advantages of the medicinal and dietetic treat-

ment of ulcer of the stomach. In a large proportion of cases treated by the author's method—which consists in rest, low diet and hot external applications—complete and permanent cure has, it is stated, been effected in the course of three or four weeks. In some cases, however (about 4 per cent.), it will be found advisable to apply for the aid of the surgeon, in order to make up for the failure of internal treatment, and to avert a fatal result. Surgical intervention, it is held, is positively indicated in cases of small but frequently repeated hemorrhages from the stomach. A single attack of profuse bleeding is not regarded as an indication for operation. Profuse hematemesis, unless caused by the erosion of a coronary artery, seldom causes death. Operative treatment, especially the performance of gastro-enterostomy, is indicated in cases of gastric ulcer, in which intense pain and frequent vomiting lead to the diagnosis of spasmodic stenosis of the pylorus. When these symptoms do not yield to rest and medical treatment and the patient is threatened with death from inanition, the surgeon should be called in at once. Surgical intervention, the author states, is generally required in cases of perigastritis, and consequent adhesion of the stomach to adjacent parts, but only when the inflammatory adhesions have formed a swelling which can be distinctly felt through the abdominal wall. In such an instance, where probably carcinoma would be suspected, exploratory laparotomy should be practiced, and, if possible, the tumor removed. Laparotomy is certainly indicated in cases in which the ulcer has opened into the peritoneal cavity. The operation, it is urged, should be performed early, as the prospects of success are very slight if it be delayed until an interval has expired of ten hours from the actual time of the perforation. At the same sitting of the Congress an elaborate review of the surgical treatment of gastric ulcer was given by Mikulicz, who, whilst agreeing in many points with Leube, advocated more frequent surgical intervention on the grounds that the disease, having a tendency to relapse, is more likely to be effectually cured by radical operation than by expectant and medicinal treatment. In cases of open non-complicated ulcer of the stomach surgical intervention, he holds, is indicated by the presence of symptoms which directly or indirectly threaten the life of the patient (frequent bleeding, increasing emaciation, commencing suppurative perigastritis), and when suitable and prolonged medicinal treatment has, after repeated trial, given but temporary relief, and the working capacity and comfort of the patient are much disturbed by gastralgia, vomiting and dyspepsia. Mikulicz, in cases of open gastric ulcer indicating operative interference, is opposed to excision of the affected portion of the stomach, and of the two remaining operations—pyloroplasty and gastro-enterostomy—prefers the former. Prompt surgical intervention, he states, is indicated in cases of perforating ulcer. The success of such intervention would be much favored, he holds, by an empty state of the stomach at the time of perforation, and by an early operation. The prospects of a good result are four times better when the operation is performed within the first 12 hours than when laparotomy has been delayed beyond this period.

MIXED TUMORS OF THE SOFT PALATE.

Berger (Revue de Chirurgie, July, 1897) publishes the following conclusions derived from careful study of cases of mixed tumors on the soft palate. These growths, he finds, form a well-marked group of tumors which possess distinctive anatomical and clinical characters. They take origin in the glandular structures af the palate, and are always enclosed within a capsule of connective tissue, which completely isolates them from the surrounding parts. They are made up of (a) epithelial elements, the arrangement of which resembles sometimes that of an adenoma, at other times and more frequently that of an epithe-

lioma; (b) a stroma presenting varying forms of connective tissue, principally mucoid tissue and cartilage. The author's observations have led him to oppose the theory of the endothelial origin of these growths. Regarded from a clinical point of view these tumors are essentially non-malignant. They never take the same course or lead to the same results as true epitheliomata. This innocent character seems to be due to the suppression of the epithelial constituents of the growth by the development of the mucoid or cartilaginous tissue of the stroma. It is occasionally difficult to distinguish these mixed tumors from sarcomata, which, on the palate, may present analogous characters, such as a slow growth, a distinctly circumscribed form and relative innocency. The sole reason for anxiety on account of mixed tumors of the palate is their gradual and persistent growth and their tendency to impair through compression the functions of adjacent organs. Their extensions toward the pharynx, the pterygo-maxillary region and the parotid gland cause some difficulty in their extirpation, which, however, thanks to their investment by a capsule, may be effected by enucleation. Local relapses, when they occur, are always the result of incomplete removal. The author finally alludes to other tumors of the palate, which, though in many respects analagous to the mixed growths, present a malignant aspect, and often perforate the palate and invade the nasal fosse and the antrum. These growths, it is stated, need further anatomical research.

Current Literature in Obstetrics and Gynecology.

SULPHATE OF QUININE IN INCOMPLETE ABORTION.

Schwab (Rev. Med-chir. des Mal. des Femmes, June 25, 1897), points out that obstetricians are not agreed as to the best treatment of incomplete abortion, some leaving matters alone unless hemorrhage or sepsis appear, others proceeding at once to the clearing out of the uterus with finger or curette. He is of opinion that, save in the cases in which the medical man can keep the patient under constant supervision, in which antiseptic precautions have been carried out from the commencement of the abortion, and in which the os is still closed, the uterus ought to be emptied at once. He admits, however, that the curette has its dangers, and that ergot is inconvenient, so he recommends sulphate of quinine. He has used it with success in seven cases of incomplete abortion. It is quite safe, it does not set up a tetanic condition of the uterine muscle, it may be given in two doses of eight grains at an interval of 10 minutes, and it usually causes emptying of the uterus in about four and a half hours.

ORIGIN OF ADENOMYOMA AND CYSTADENOMA OF THE UTERUS.

Meyer (Centralbl. f. Gynak., No. 24, 1897) has continued Recklinghausen's researches, which showed how important glandular elements naturally lie imbedded in non-glandular portions of the uterus and tube. He exhibited at a meeting of the Berlin Obstetrical Society sections displaying glandular structures in the muscular tissue of the uterus in the adult and in new born children. These structures, sometimes acinous, at others tabular, were histologically identical with the endometrium. But he was also able to produce sections showing adenoma clearly derived from the Wolffian duct. The clinician and pathologist will also be interested to find that Meyer demonstrated a bilateral persistence of the Wolffian duct in the vagina itself of a new born infant; the left duct bore a strongly branched diverticulum, which left the main channel just before the latter entered the vaginal wall, and ran upward in the substance of the cervix. This diverticulum has been described as the true termination of the duct, which, some embryologists declare, never enters the vagina. In submucous myoma, endometric glandular tissue is often detected, as Meyer was able to demonstrate. He also showed bilateral adenoma of the tube close to the ovum from an adult who had died of phthisis, and also a complex condition where a cystic adenoma was of endometric tissue, undergoing cancerous degeneration, whilst in the peripheral part of the same uterus lay glandular structures of Wolffian origin.

GONORRHEA A CAUSE OF DETACHMENT OF PLACENTA.

Maslovsky (Ann. de Gynec. et d'Obstet., March, 1897) reports that a primipara, aged 22 years, was seized with flooding during the ninth month of pregnancy; severe hypogastric pains were present, and large old clots were ultimately expelled. There was an abundant thick vaginal discharge. The fetal heart sounds could be heard; the presentation was right occipito-posterior. Owing to the presence of very old clots the normal condition of the cervix and other symptoms, Maslovsky diagnosed detachment and not abnormal insertion of the placenta. Delivery was effected. Three days later the child had conjunctivitis. Gonococci were found in the uterine mucus and also in the substance of the placenta, where there was evidence of an active inflammatory process affecting the structures impinging on the maternal tissues. Maslovsky terms this form of inflammation "endometritis decidualis gonorrhoica." There can, at least, be little doubt that changes due to gonorrhea often prove disastrous to the course of utero-gestation.

ECTOPIC GESTATION TWICE IN THE SAME PATIENT WITHIN SEVEN MONTHS.

The June number of the Australasian Medical Gazette contains a paper by Dr. Ralph Worrall under the above heading. The patient, a multipara, was admitted to the Sydney Hospital blanched and anxious-looking, with distended and tender abdomen. She had missed a period and thought herself pregnant. She fell five days before admission and had pain in the right inguinal region. Abdominal section was performed and many pints of dark fluid blood were evacuated. On the posterior surface of the right broad ligament was a ragged opening. The ovarian artery was tied on each side of the tear, and the ragged portion of the ligament cut out and sutured. The patient made an easy recovery. This was in January, 1896. On August 20 she was seen again. She had again missed a period, and the following day was attacked with pain and slight collapse. She remained in bed and had two further attacks of pain. She was admitted to the Sydney Hospital and abdominal section was performed, when a large quantity of dark fluid and clotted blood escaped. The bleeding came from the left tube, which was unruptured, but dilated, and held entangled in its fimbriae a tubal mole.

The patient made an uneventful recovery. Dr. Worrall can find only two cases recorded of repeated ectopic gestation in the same patient, and both of these occurred after the lapse of several years.

—The Lancet.

THE CHOICE OF MERCURIAL TREATMENT.

Fournier (Sem. Med., June 30, 1897) gives rules for administering mercury in different cases of syphilis. Leaving aside fumigation, baths, mercurial plasters, etc., as antiquated, there remain three possible methods: (1) Ingestion, (2) inunction, (3) hypodermic injections. The advantages of ingestion are: (a) Simplicity, (b) it being usually well tolerated by the mouth and intestinal tract, (c) its proved activity. The disadvantages are: (a) It may upset the digestion, (b) it is only tolerated in moderate doses, otherwise diarrhea and stomatitis appear; (c) it is therefore only suitable where a moderately active and not very rapid method is indicated. The advantages of inunction are: (a) It is intensely active, (b) it does not, unless exceptionally, upset the digestion, (c) it leaves one free to give any other medicine by the stomach. The disadvantages are: (a) The trouble and time required are such that few patients will carry it out properly, (b) the course cannot be kept secret, (c) its curative effects are very unequal, probably depending on the way it is performed, (d) it is more likely than any other method to produce stomatitis of a very severe character. As regards hypodermic injections, there are two methods, namely, frequent or daily injections and occasional injections. The advantages of the former are: (a) It is an active method, whose activity can be regulated from day to day, (b) it does not upset digestion, (c) the stomach is free from other medicines. Its disadvantages are: (a) The possibility of local complications and the severe pain, (b) the impossibility of carrying it out properly outside a hospital. Occasional injections are remarkably active, and sometimes work extraordinary cures not seen in any other treatment—such as the disappearance in a few days of large tuberculous syphilides, tertiary glossitis, gummatous laryngitis, etc. Of the advantages, some, such as stomatitis, are common to other methods; some, such as the almost inevitable injection nodules, are not of much importance, and some, such as phlegmonous inflammation, can be avoided by antisepsis. The great and unavoidable disadvantage is the pain. The author found that even a small dose, such as 1-130 of a grain of calomel, is often extremely painful. Of 400 calomel injections the pain was bearable in two-fifths, intense in three-fifths, and in one-fifth of the latter intolerable. Many have therefore given up the treatment altogether. This is wrong, as it is very valuable in exceptional cases, where a rapid effect is important or which do not yield to other treatment. Such cases are iritis and other ocular affections, ulcerated tuberculous syphilides, spreading gummatous ulcerations, phagedenic chancres, gummatous laryngitis, etc. Exfoliative glossitis also often yields to no other treatment. From the above summary certain indications are evident: (1) As regards the patient himself, if robust, ingestion will probably be most suitable, but if dyspeptic or cachectic this must be avoided; if his dentition is bad the best treatment is the perchloride by the mouth, inunction and occasional injections of large doses being then altogether contra-indicated. Injections are not to be used unless really necessary in workmen and others who live by the use of their limbs. (2) As regards the kind of syphilis, it may be rightly said that ordinary cases should be treated by ingestion, more severe by inunction, and the worst by injections. (3) As regards the object of the treatment, if it is for any particular symptom the course most suited for it must be chosen; if it is to cure the disease the first consideration is that the course must be a long one. Hence, owing to the disadvantages of inunctions and injections, ingestion is by far the best for this purpose, the course being interrupted now and then, but lasting for years.

ROYAL COLLEGE
30 SEP 97

The Times and Register.

Vol. XXXIV. No 6. Philadelphia and Boston, September 18, 1897. Whole No. 946.

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Original

SYCOSIS OF THE NASAL VESTIBULE

BY LEWIS S. SOMERS, M. D., PHILADELPHIA, PA.

The so-called non-parasitic sycosis or folliculitis, involving the hair sheath, may occur on any portion of the body where hair exists. As an infrequent condition it is seen involving the vibrissae of the nasal vestibule, and, although non-productive of any serious or permanent damage to the parts affected, is extremely annoying and painful to the patient. The disease in this locality is rarely seen by the rhinologist as the affection is generally considered too trivial and in the majority of cases is regarded as a "boil in the nose" not requiring treatment. In a few cases seen during the past year the affection was especially severe and attended with quite well marked constitutional symptoms.

The history of a typical case is as follows: The patient on blowing the nose will notice the vestibule on one side, usually the left, to be slightly painful to the touch, inspection showing no evidence of inflammation externally. If the interior of the nose is examined there will be seen a small patch of congestion, three or four millimetres in area, usually situated on the inferior portion of the external vestibular wall, where the vibrissae abound in the greatest number. In about twenty-four hours a papule will have formed in the centre of which projects a hair shaft, this papule may become still larger in size constituting a distinct tubercle, no evidence of pus yet being present. The pain in the local-

ity of the inflammation is quite severe, especially if the tip of the nose is subjected to the least pressure. In from 24 to 48 hours later, evidences of pus formation will be present, both objectively and subjectively, the former by the pointing of the tubercle, a small white or yellow area surmounting its tip and surrounding the hair shaft and the inflammatory signs such as redness, oedema and swelling involving the tip and side of the nose. The subjective symptoms are intense throbbing pain, which may be so severe as to cause the entire head and face to ache; a feeling of tension due to the pressure exerted by the inflammatory products, and finally, in a few cases, fever and malaise may be present out of all proportion to the small area affected. At this time the hair shaft may be extruded, with discharge of the purulent matter through the remaining orifice and a subsidence of the symptoms, both local and general, with a complete spontaneous cure; or, after the evacuation of pus a small ulcer may remain for several weeks. The ulcer is shallow, round in shape, and covered with a dry crust, which when removed allows a drop of pus to escape. Frequently the hair remains in situ and is then surrounded by the area of ulceration.

In a few cases seen the affection presented one of two forms, being either sub-acute, with acute axacerabations or chronic in character. The sub-acute form was characterized by the formation of papules and tubercles, resembling the so-called blind boil and continuing from four to eight weeks. At times the inflammatory action being barely apparent alternating with acute attacks, rarely going on to pus formation, the tubercle when punctured discharging turbid serum mixed with blood. The chronic type is probably due to repeated traumatism of this region of the nasal cavity, caused by removing dried secretions and so lacerating the dermal lining and producing repeated local infections by pus forming organisms. The duration of the affection extending over a considerable period of time, several weeks and even months elapsing before complete disappearance of the local changes. The chronic form resembles to some extent the sub-acute variety, but there is more infiltration of tissue and pus formation, the purulent matter discharging from several minute cavities, resembling to a great extent that caused by a septic wound with multiple foci of infection, but differing inasmuch as the area affected is very small of necessity, from the size of the part affected.

In nearly all cases the general health of the patient seems to be below par, this being especially marked in the chronic form. A concomitent nasal catarrh is usually present, the irritating secretions excoriating the vestibule, and in males the upper lip in a small number of cases, and by its irritating and macerating properties preparing the way for microbic infection by the pus producing organisms, thus forming the complete pathological complex. The disease is essentially a peri-folliculitis, originally simple inflammatory in origin, this having given rise to the erroneous title of sycosis non-parasiticae. Any of the pus producing organisms may become grafted upon the inflammatory process already set up, and we have the characteristic pustule surrounding the hair sheath. The organisms usually found are those normal to the skin as the staphylococcus pyogenes aureus, staphylococcus pyogenes cereus and albus. The disease is a pyogenic folliculitis, injuring the hair follicles and softening and destroying its sheath, the papillae of the hair usually escaping destruction, and after sufficient time a new vibrissae forms to replace the one destroped.

In this locality the affection occurs most often between the ages of 25 and 50 years. I have never seen a case under 20 years of age, but can see no reasons why it could not occur, although it should be remembered in this connection that the nasal vibrissae are not fully developed until after the period of puberty and frequently not until several years later. The diagnosis is readily made, the disease not resembling any other affection in this locality. Attention may here be called to the

eruption due to the local application of croton oil, being practically identical with sycosis if a minute quantity of the drug be applied to the vestibule. This factor can be readily eliminated by the history of the case. As before said the disease is non-productive of permanent damage, although in the chronic form there may be quite extensive infiltration of the tissues with inflammatory products, yet after appropriate local, and especially constitutional treatment, the parts will be restored to their normal condition. In two acute cases seen, there was quite extensive pus formation, causing intense swelling and oedema of the tip of the nose, and in one case the small abscess discharged externally between the sesmoid cartilages, yet recovery though prolonged was complete, leaving the organ in its normal condition. Although the disease is due in its pus producing stages to micro-organisms, it is not contageous, at least from a clinical point of view.

The treatment resolves itself into local and constitutional. The latter I believe to be most important, and if properly carried out giving a most satisfactory result. The general health of the patient must be looked after and suitable tonics directed, if the sycosis is the result of nasal catarrh, proper treatment directed to the intra-nasal condition must be instituted. Strychnia in doses of 1-60 grain three times daily is very serviceable, especially if used in the form of the compound syrup of the hypophosphites. Attention to the diet and hygiene of the patient is of importance, the sycosis occasionally resulting from improper food, both as regards quantity and quality.

Locally, I prefer to wash the inflamed vestibule with a mild antiseptic, alkaline solution, such as Seiler's or Dobell's; this is used morning and evening, and after the parts are cleansed, an ointment containing two grains of the yellow oxide of mercury to the ounce of lanoline, is well rubbed over the entire vestibule, not only applying it to the part affected, but over as much of the nasal fossae on the inflammed side as can be reached by the patient's finger. This application is very grateful and sooting, and will alleviate the discomfort considerably. After pus has formed, extirpation of the affected hair sheath will allow the purulent matter to escape and give great relief, especially if the parts are then treated as previously directed. Sulfide of calcium in frequent doses may be used, but has proven of little value in my hands.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

ON SOME OF THE CLINICAL AND MORPHOLOGIC FEATURES OF MIXED TUMORS.

The evolution of new growths is governed by no immutable laws.

For examples, many swellings may primarily present many features suggesting malignancy, the presence of pain, the tendency to infiltrate, early degeneration, hemorrhage and ulceration, and yet, with improvement of the general health and appropriate treatment, resolution succeeds, and the parts completely recover their normal state. Then, again, a simple papillary excrescence, adenomatous masses or simple ulcers,may give rise to evidence suggestive of malignant changes.

This is most often observed, in the lymphatic structures, in papillary proliferation within cavities, especially those of the rectum or bladder, and ulcers on any of the mucous surfaces. In the process of tubercular or syphilitic ulceration, it is often extremely difficult to distinguish it from the ravages of cancer.

In both we have essentially the same cardinal symptoms in the earlier stages, tumifaction, pain and tenderness, and, with later advances, about the same destructive march in both.

The state of the system nor the participation of the internal organs will be of little aid to us in many. In tuberculous ulceration we look for the pyrexia of that condition, with complicating pulmonary symptoms; but these may be, but indistinctly manifest, if present at all. It is well to bear in mind, also, that the spread of and breaking down of epithelial invasion is always accompanied with an infection of the lesion, suppuration and systemic pyrexia from resorption of the pyogenic elements.

The same may be said of simple ulcerations, or those erosions and infiltrations of the mucous membranes, such as are consequent on trauma, best illustrated in lacerations of the uterine cervix, or infected lacerations, as abrasions in the ano-rectal region.

The degenerative changes of both tubercle and cancer present so many similar, clinical features, that many able pathologists and clinicians have maintained that something more than a casual relation exists between them.

Nevertheless, clinically, we must distinguish a very wide difference, inasmuch as one tubercle, though more common and destructive to life than cancer or sarcoma is, nevertheless, more responsive to remedies, as it very often is a malady which may undergo arrest or cure, while epithelial infiltration, especially when it seizes on organs, is, it should be candidly confessed, hopelessly beyond the reach of human aid. Operate we may, and often secure a tem-

porary relief for our unhappy patient, but genuine cancer will inevitably return and destroy.

This view is not in accord with the latest statistics, but statistics on this subject are a delusion.

In my own experience now, of more than twenty-two years, no single instance of cancer has come under my observation which the patient has survived two years. Epitheliomata are not included.

But it is of the highest importance for one to endeavor as far as possible to make a clinical diagnosis in this class of cases.

But we might allege that at present, with our great advances in microscopical research, this is unimportant, not that an early diagnosis is necessary, but that the clinical is immaterial.

This is another fallacy, or rather far-fetched statement. So many mistakes have come to my notice of well-known microscopists confounding benign with malignant growths, that I have come to the conclusion that the lens can, in no sense, be regarded as anything more than an aid in diagnosis of malignant disease. There is altogether too much disparity between its revelations and clinical evidence; too many simple lesions set down for malignant; too much "cutting early and cutting wide" for lesions which are of doubtful existence. They don't return after those mutilating dissections, it is true, for the reason, no doubt, that genuine cancer never existed.

Having spent nearly three years in a pathological laboratory, under the late eminent Carl Heitzman, of New York, the writer gives this expression of opinion advisedly, or something more than shallow, unsupported assumption.

In sarcomatous degeneration, or simple adenomatous proliferation, a study and analysis of the clinical features shed great light on the case. This embryonic type of tissue degeneration has been isolated and described first by Virchow.

The tumification of sarcoma is often distinguished with great difficulty, clinically, from simple inflammatory proliferation; nevertheless, this must be our main reliance, for, microscopically, the definite isolation of lymphoid corpuscles of inflammation, from the medullary elements of sarcoma, is often quite impossible.

It is, therefore, evident, that clinical medicine yet "holds the fort."

Inoculations, cultures, the segregation of stained bacteria, are important diagnostic aids, but without a systematic examination of one case, with observation of all the symptoms and its course are in themselves quite useless.

Coming back to "mixed" tumors, it may be stated that we will sometimes encounter masses which present many complex features, some suggestive of malignancy, and others which we interpret as benign.

These are more generally encountered in the uterus and the mammary gland.

At one time they are a source of severe pain, are tender on pressure and fixed, when, after a while, those symptoms yield for another period, when they recur either with augmented intensity or less severity. In others again they disappear after an interval altogether.

Here clinical medicine comes in again. It is all very well to declare that the practitioner must be educated into sending his cases of tumors early to the surgeon for operation, but he is conscious of the obligation he owes his patient, not to turn her over for the scalpels and for the removal of a tumor which may of itself disappear, which does sometimes occur in those of mixed type.

Evidence comes to us from every direction that benign neoplasms may undergo malignant changes, and on the contrary, we have no proof that malignancy of a mass may reach a certain limit and undergo arrest. The clinical history of various cases supports such a probability.

ON A NEW METHOD OF DISINFECTION OF LARGE ROOMS AND WARDS WITH FORMALIN.*

BY HANS ARONSON, M. D.

(Translated from Zeitschrift fur Hygiene and Infectionskrankheiten, Vol. XXV, June, 1897.)

In the beginning of the year 1892, Trillat | and I || independently made the first exact studies of the antiseptic properties of formaldehyde, and in the succeeding years many attempts were made to utilize the material for disinfection upon a large scale. The formaldehyde gas, to whose bactericide properties I called attention in my very first communication, was naturally the form in which it was sought to be employed. But, simple as the problem appeared, there were great practical difficulties in the way of its solution. The easiest way was apparently to develop the gas by means of heat from the commercial solutions of formalin. It was soon apparent, however, that this method was an impossible one.

As soon as the concentration of the solution exceeded forty per cent. a polymerizing of the formalin occurred, with a precipitation of solid paraformaldehyde. If the heating is continued, a solid, coherent mass forms in the bottom of the receptacle employed, which finally begins to burn. To avoid this difficulty it has recently been attempted to obtain the gas from a solution of formalin in methylated alcohol called holzin. This method, however, has several great disadvantages. The unavoidable spattering of the concentrated solution of formalin when heated may cause unpleasant accidents to persons in its neighborhood; the vaporization of large quantities of methylated alcohol is not innocuous; polymerization of the formalin cannot be entirely avoided; and large quantities of the costly wood alcohol are wasted. Finally, it is not possible with this apparatus to develop large quantities of formaldehyde vapors in a short space of time; and this latter factor is of vital importance for a thorough disinfection.

In a second class of apparatus an attempt is made to develop the formaldehyde vapors by means of the oxidation of methyl alcohol itself. For this purpose a large number of lamps have been devised by Trillat, Bartels, Krell, Beuster, Schulze and others. Practical use of these lamps on a large scale has given unsatisfactory results (comp. Pfuhl*). This was to be expected when we remember that the oxidation of the methyl alcohol in these lamps is generally effected by means of glowing spirals of platinum wire, and the product of aldehyde, which alone is efficacious, forms necessarily only a small percentage of the methyl alcohol that is employed. By far the greater part of it is lost as carbonic oxide and carbonic acid gases. Apart from the cost, a large number of lamps are required to effectively disinfect even a small room, as Pfuhl has proved by practical experimentation.! Nor does it seem proper that the formal-

*Paper read before the "Verein fur offentliche Gesundheitspflege," Berlin, April 26, 1897.

| Comptes Rendues, T., CXIV, p. 1278.

|| Berliner klin. Wochenschrift, 1892, No. 30. The paper before the Berlin Medical Society was read before Trillat's communication appeared in the Comptes Rendues.

*Zeitschrift fur Hygiene und Infectionskrankheiten, 1896, Vol. XXII, p. 339.

! These remarks apply also to various American formaldehyde generators in which wood alcohol is used to produce vapors of formic aldehyde.

dehyde should be thus made at home on a small scale, not to speak of the danger from fire. Schepilewski was right when, in a recent communication, he doubted the possibility of disinfecting large areas by means of formalin in this manner.

Good results in disinfection upon a large scale were first obtained by Rous and Trillat,** by means of a pressure apparatus constructed by the letter. In this a formaldehyde solution is greatly superheated under a pressure of three atmospheres. The deposition of paraformaldehyde is prevented by the addition of calcic chloride. But the apparatus has many disadvantages from a practical point of view. Apart from its great cost (for all pressure apparatus must be very solidly and strongly constructed), I consider it quite improper to give such autoclaves into the hands of laymen; and it would certainly be in contravention of our police regulations.

A simple apparatus, which could be readily handled by the unskilled, and by means of which sufficient quantities of formalin gas can be quickly developed for the disinfection of rooms and houses, is therefore a desideratum. Such a one has been constructed by the chemical factory of E. Schering.* In view of the great importance of the subject, I have gladly undertaken the task of making a thorough bacteriological investigation of its action. The solid polymerized formalin or paraform (called also trioxymethylen) is used for the development of the formalin vapors. The antiseptic properties of this body, which I ! first described at the "Verein fur innere Medicin," March 12, 1894, depend upon the vapors which proceed from it at ordinary temperatures. At the same time I demonstrated, by means of numerous experiments upon man and animals, that the polymerized formaldehyde was an almost non-poisonous body, and was well borne by children when given internally, even in large quantities. The use of this body as a formalin gas developer is very appropriate. It has been found more practical in many ways to use the polymerized formaldehyde compressed into the form of pastils, rather than as a powder. (Each such formalin pastil, which contains 100 per cent. of formaldehyde, weighs 1 gramme—15.4 grains.)

The action of the apparatus is as follows: The hot gases of combustion transform the paraformaldehyde into gaseous formaldehyde, and are afterwards thoroughly mixed with them. This mixture of the vapors of formaldehyde and of combustion enables the necessary quantity of moisture to be present to hinder a polymerization, and renders a thorough disinfection possible. In the stream of the gases of combustion a rapid distribution of the effective formaldehyde vapor into all portions of the space to be disinfected takes place.

The apparatus (comp. fig. page) consists of a cylindrical sheet-iron mantel a, beneath which is a spirit lamp b, with a suitable wick. In the upper part of the mantel a hangs a vessel r, destined to contain the formalin pastils. The upper end of the vessel r is provided with a number of slits, through which the gases formed by the combustion of the alcohol (carbonic acid and watery vapor) must escape. In their passage through this vessel there is a thorough mixture of these vapors of combustion with the formalin vapors generated by the heating of the formalin pastils.

The mode of using the apparatus is extremely simple and safe. The disinfector is placed upon a sheet of tin on the floor of the room to be disinfected. In the apparatus that I employ from 100 to 150 pastils can be vaporized at once. For the production of greater quantities of formaldehyde vapor, several of these apparatus must be used together.

The lamp b is filled with ordinary alcohol (80 to 85 per cent.); about twice as many cubic centimetres of the fluid being employed as there are pastils to be vaporized in the vessel (i. e., 100 pastils require about 200

**Annales de l'Institut Pasteur, 1896, Vol. X, p. 283; comp. also Bosc., p. 298.

*Patents have been applied for on this method of disinfection.

! This paper has not yet been published in extenso. There are good abstracts of it in the Munchner med. Wochenschrift, 1894, p. 239, and the Berliner klin. Wochenschrift, 1894, p. 900.

ccm. (7 ounces) of alcohol). The wicks should project but little above the necks of the burners, lest the apparatus get too hot. The vessel r is to be filled with formalin pastils, and the disinfector placed over the lighted spirit lamp. Windows, registers and other openings are to be carefully closed before the lamp is lit, and the key holes should be stuffed with paper. After the room is closed the apparatus may be allowed to burn itself out.

I have experimented with this apparatus under conditions as similar as possible to those met with in practice. I used a room about 100 cbm. (3500 cubic feet) in size, 7.7 m. (25 feet) long, 4.0 m. (13 feet) broad, and 3.3 m. (10 3-4 feet) high, in different portions of which the test objects were placed. I may mention at once that there was no difference in the result whether these test objects were placed on the floor of the room, suspended in its middle, or put near the ceiling. This demonstrates the even distribution of the formaldehyde vapors, due to the fact that its specific gravity is almost the same as that of the air.

For test objects I employed the staphylococcus, the streptococcus, the bacillus pyocyaneus, typhoid and diphtheria bacilli, anthrax spores and tubercle bacilli. The test objects were prepared in various ways. Sterilized strips of gauze or wall-paper, or strips of linen or woolen stuff, were soaked in bouillon pure cultures of the first five varieties of bacteria, and were used moist or after drying in vacuum. Anthrax cultures containing spores were scraped from the agar tubes, floated in distilled water, and used for the impregnation of threads of silk or gauze. In one experiment they were spread in a thick layer upon strips of sterilized wall-paper. The tubercle bacilli were used in the form of thick surface cultures on bouillon, and also in the shape of tubercular sputum, which was thickly smeared upon strips of gauze.

In the first series of experiments two disinfectors, each provided with 100 pastils, were placed in the room, making about 2 grms. (30.8 grains) for each cubic metre (35 cubic feet). After the test objects were placed in position, the two lamps were lit, the room closed, aad only opened again after twenty-four hours. On first entering it the formaldehyde odor was so intense that I could only remain in it for a very short time, on account of the great irritation to the eyes and throat. But opening the windows quickly dispelled the odor. The pieces of cloth, etc., were taken up with sterilized forceps, inoculated into bouillon tubes, placed in the incubator, and observed for weeks. In every case portions of the same test objects that had not been exposed to the formalin vapors were inoculated upon similar tubes to control the experiments; and in every case they showed an abundant growth. In a large number of the trials the test objects were washed in a diulte ammonia solution after the disinfection, to remove any traces of formaldehyde, which might interfere with the growth of the culture. Similar non-disinfected test objects were treated with the same ammonia solution, and showed an undiminished vigor of growth.

The results of these numerous experiments, the minuter details of which are appended below, were that, with the exception of a few tubes,which were contaminated with other bacteria during the process of inoculation, there was no bacterial growth in any of the tubes. To test the absolute sterilization of the anthrax gauze and silk threads, portions of them were inserted under the skins of guinea-pigs. And while control animals, treated in precisely the same way with non-disinfected material, died after one and a half to three days, those treated with the disinfected material remained entirely healthy. The testing of the tubercle bacilli, both of the pure cultures and sputum, was done upon animals. Similar quantities of the untreated pure cultures and of those that had remained for twenty-four hours in the disinfected room were rubbed up in a sterilized vessel with six ccm. (1 2-3 drachms) of water, and injected into the abdominal cavity of guinea-pigs. The pieces of gauze with the sputum and dried were soaked in a similar manner in a few

cubic centimetres of water, and similarly injected. The control animals died in from four to five weeks with typical tuberculosis, while the guinea-pigs treated with the disinfected material remained healthy; and, when I killed them six weeks afterward, they showed no trace of tuberculosis.

The dust upon the floor of the room, and also that obtained by superficial scraping of its walls, proved to be entirely sterile after the twenty-four hours' disinfection.

A second series of experiments were made with one disinfector and 100 pastils, being one pastil per cbm. (35 cubic feet). All the non-spore containing material, staphylococci, streptococci, pyocyaneus, typhoid and diphtheria bacilli were killed after twenty-four hours' sterilization. But the anthrax spores were not in every case destroyed. Some of the strips of gauze and silk threads proved sterile; but others developed a culture. For practical purposes, however, this number of pastils would be entirely sufficient.

I further made a series of experiments regarding the penetrating power of the formaldehyde vapors. In accord with the earlier results of Vaillard and Lemoine,* I found that it was not very marked. Test objects wrapped in several layers of filter paper or thin muslin were, however, disinfected. Infectious material placed in the midst of the feather stuffing of a pillow was not satisfactorily reached by the formalin vapors. Steam would certainly be preferable for beds, mattresses and other similar articles. Disinfection with formalin vapor is, however, very suitable for clothes, rugs, hangings, etc., that are hung up in the room. This I proved by a number of experiments. It is important in such cases that all the surfaces are exposed as freely as possible to the air. If a test object, such as the strips of gauze impregnated with staphylococci or pyocyaneus, is put deep in the pocket of a coat, and compressed, disinfection (at least with 2 gm.—30.8 grains) of the polymerized formalin to the cubic metre (35 cubic feet) does not take place with certainty.

One very favorable feature of the disinfectant process with formaldehyde gas is the fact that clothing and furniture are in no way attacked by it.

Of very great importance also is the non-poisonousness of the gas. In many of my experiments I allowed guinea-pigs and rabbits to remain in the room while disinfection was going on, and I found the animals perfectly well the next day. On killing the animals, there was not even, as might have been expected, irritative or inflammatory appearances in the bronchi.

It is a remarkable fact, and one to which I called attention in my very first publication, that formaldehyde, so excessively poisonous to the schizomycetes, is relatively innocuous to the higher organisms. Even the hyphomycetes flourish in a nutrient medium containing an amount of formaldehyde that renders all bacterial development impossible.

*Annales de l'Institut Pasteur, 1896, Vol. X, p. 481.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

SCHERING'S DISINFECTANT AND DEORDORIZING LAMP.

Formalin has been known for years as the most efficacious and penetrating of disinfectants. The Schering Chemical Works, in Berlin, Germany, have solved the problem of its employment in gaseous form with perfect safety, by means of two simple and therefore inexpensive instruments.

The formalin is not employed, as was heretofore the case, in fluid form, but as pastils (paraform). It is a perfectly indifferent and insoluble body, and can therefore be freely used by any one. These formalin pastils are vaporized in the apparatus by a new process of our own discovery, and the formalin is given off in its gaseous and most active form.

The chief properties of formalin may be summarized as follows:

1. Formalin is admittedly the most energetic disinfectant that we know of. (It destroys all pathogenic organisms, even the most resistant, as the anthrax spores.)

2. Formalin in gaseous form is entirely innocuous, in spite of its penetrating odor. One of its most remarkable properties is its virulent action upon bacteria; but in the gaseous form it has no deleterious action at all upon the higher organisms. Even the continuous inhalation of large amounts of formalin is not in any way injurious to health. The lamp and disinfector, however, are so arranged that no formalin odor can penetrate the rooms adjacent to the one that is being disinfected.

3. Formalin is the best deodorizer that we possess. Even small quantities remove foul odors, uniting with the bodies that cause them to form odorless compounds. The odors, therefore, are not merely covered up, but are completely destroyed.

4. Formalin is our best preservative medium, being efficacious in that respect, even when present only in very small amount.

ADVANTAGES OF THE SCHERING METHOD OF DISINFECTION.

1. The gaseous formalin penetrates everywhere, into all the corners and

crannies, and kills all the disease germs that may be present in the room.

2. The apparatus are so constructed that a spontaneous and even distribution of the gaseous formalin necessarily takes place; this being an essential condition for a really efficacious disinfection. It is obtained by a peculiar admixture of the formalin vapor with the gases of combustion derived from the alcohol that heats the apparatus. They have the further advantage that the formalin is used in them in concentrated form, as pastils containing 100 per cent. of pure formaldehyde. Thus a pastil weighing one gramme (15.4 grains) develops one gramme (15.4 grains) of pure formaldehyde gas, and therefore equals 2 1-2 grammes (38 1-2 grains) of the 40 per cent. fluid formalin. One gramme of pure formaldehyde gas as obtained by heating one pastil occupies a space of 745 ccm. (260 cubic feet.)

3. Schering's apparatus are not cumbrous, can be taken anywhere, even when traveling, and can readily be used by any one.

4. The Schering method of disinfection is incomparably more efficacious, simple and cheap than all previous ones. No troublesome preparations are required, and the process may be started at any moment. It compares very favorably with the complexity of other methods, and the lengthy and troublesome preparations that they require.

5. The Schering method of disinfection possesses one important and, indeed, inestimable advantage over all others—it does not injure fabrics or material of any kind. Furniture, carpets, hangings, metallic articles, colors, etc., are in no way attacked. Rooms to be disinfected need not be cleared of their furniture and ornaments.

The older methods of disinfection are feared by the public because, in addition to their other disagreeable features, they often entirely ruin valuable objects. Even at the expense of health, such processes are usually avoided. This is entirely obviated by the Schering method.

According to Dr. A. B. Griffiths, of London, the vaporization of from 40 to 50 pastils, in a medium-sized room that is tightly closed, suffices to destroy the germs of the commoner infective diseases, such as the organisms of diphtheria, typhoid fever and tuberculosis. In these as well as in other diseases, such as scarlatina, influenza, etc., which are probably of a similar infectious origin, the disinfectant lamp is invaluable as a means of preventing the spread of contagion. For the same reason, it is of the greatest value when traveling at watering places. If it seems necessary to undertake a thorough disinfection, in order to destroy spores more resistant than these, two lamps may be used; or, better, the formalin disinfector, which is also inexpensive, can be employed.

The disinfectant lamp renders excellent service where it becomes necessary to thoroughly remove evil, foul and decomposing odors from a room. Rooms containing food that is prone to decompose, as meat, game, milk, etc., are given a preservative influence extending from one to several days at the same time that they are deodorized.

The formalin disinfector is constructed upon the same principle as the disinfectant and deodorizing lamp, and, though larger, is, like it, convenient, cheap and easy to use.

Schering's formalin disinfector is specially designed for disinfection on a large scale, for the complete disinfection and sterilization of large rooms, entire dwellings and their contents; as also for the thorough disinfection of single rooms in cases where it is desirable to destroy the more resistant spores. In consequence of its larger reservoir for the formalin disinfectant pastils, and the greater heat that is developed the room is so rapidly filled with the formalin vapors that the most resistant bacilli and spores are inevitably destroyed. A complete surface sterilization takes place, and we have every assurance that all the pathogenic organisms are destroyed. This has been most thoroughly proven by varied and repeated experiments on a large scale.

Not only are the diphtheria typhoid, and tubercle bacilli, streptococci, staphylococci, etc.,

killed, but the most resistant forms, as the anthrax spores, are entirely destroyed. These latter, as is well known, are among the most resistant of all the micro-organisms, and their destruction has been selected by Professor Koch as the criterion of the efficacy of a disinfectant. In every trial that was made with the above-mentioned bacteria and spores, which were exposed in the room to be disinfected, either smeared upon pieces of wall paper or impregnated upon linen rags, they were entirely destroyed by the process. Even thick layers of pure cultures of the tubercle bacilli were sterilized through and through.

To effect a thorough and deep-reaching disinfection of a medium-sized room, say of 80 cbm. (3000 cubic feet), about 9 m. (30 feet) long, 3 m. (10 feet) wide, and 3 m. (10 feet) high, the vaporization of 100 to 150 formalin pastils is required. This is about one to two formalin pastils to each cbm. (35 cubic feet). For the disinfection of very large rooms, two disinfectors should be used.

In addition to its great simplicity and its absolute certainty, this method of disinfection possesses the advantage that it in no way injures the contents of the room to which it is applied. After repeated and thorough disinfection of reception and living rooms, with all their contents undisturbed — furniture, carpets, hangings, oil paintings, metallic articles—not the slightest change was observed. The colors were perfectly preserved.

1. For Disinfection.

DIRECTIONS FOR THE USE OF SCHERING'S FORMALIN DISINFECTANT AND DEODORIZING LAMP.

The lamp should be placed upon a table or on the floor in the middle of the room, the doors, windows and other openings being closed. The keyholes should be sealed by stuffing them with paper or cotton. Closets must be opened wide, and all clothing, bedding, etc., must be spread out; or, better still, hung up.

The cup (e) should be removed, as it is used only for deodorization and inhalation, then the glass chimney (a) with the globular container (r) is taken off from the lamp (b) and the container (r) filled with a number of

Schering's formalin pastils. For the destruction of the less resistant disease organisms, such as the bacilli of diphtheria, typhoid fever and tuberculosis, forty 1-gramme (15.4 grains) pastils, the contents of two of the small boxes, will suffice in a medium-sized room, 3 m. (10 feet) high, 3 m. (10 feet) broad and 8 m. (26 feet) long. Then the reservoir of the lamp (b) is about half filled with alcohol after unscrewing the burner; the wick is lighted, and so regulated that it projects about 2-3 mm. (1-12 to 1-8 inch) above the tu
If wood alcohol is used as a fuel the wick should be about even with the tube (burner), as a too large flame will produce more heat than is required. More than two ounces wood alcohol should not be placed in the reservoir, which holds four ounces. The chimney (a), with the filled container (r), is then replaced upon the lamp. No one should remain in the room, and the doors should be tightly closed, since the large amount of formalin vapor that is developed is very penetrating, and may be unpleasant in that it causes lachrymation in the occupants of adjoining rooms. Nevertheless it is expressly to be remarked that the inhalation of formalin vapors is in no way injurious to health.

The apparatus once started, it may be left entirely to itself. The light need not be extinguished, since the lamp burns out with perfect safety. According to the flame, two ounces of alcohol or wood alcohol will burn from four to eight hours. After 12 to 24 hours the room should be aired, and the formalin vapors

will quickly disappear. If the room is to be thoroughly disinfected, and the most resistant spores killed—a procedure that is not necessary under ordinary circumstances—two lamps should be employed, or the formalin disinfector can be used.

For deodorizing purposes the cup (e) is employed; it fits into the globular container (r), and is designed to permit a slower volatilization of the pastils.

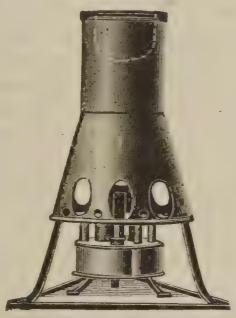
The cup (e) is filled with one or more pastils, the chimney (a) with parts (e) and (r) is removed, and after unscrewing the burner the reservoir of the lamp (b) is half filled with alcohol or wood alcohol. The wick is then lighted, and the flame turned down as low as possible, so that very little heat is received by parts (e) and (r), and the vaporization of the formalin pastils proceeds as slowly as possible. The wick should then be 2-3 mm. (1-12 to 1-8 inch) below the neck. Then the chimney (a) with parts (e) and (r) is replaced. The production of the disinfectant vapor is so slow that it can hardly be perceived by the smell; yet it completely removes all foul odors, and thoroughly purifies the air of the room.

The room may be used during deodorization, since the very small amount of formalin odor causes no trouble at all. The flame may be kept so small that the vaporization of a single formalin pastil will take three or four hours. If the room can remain unoccupied the size of the flame can be increased, and the vaporization and deodorization can be effected in a shorter time. The same may be done in the preservation of food in small rooms; for larger rooms see under I.

Note.—When the wick has become too short after repeated use of the lamp a new one, as closely woven as possible, should be employed. It is desirable to remove the small amount of ashes that remains in the holder (r) after each disinfection.

DIRECTIONS FOR THE USE OF SCHERING'S FORMALIN DISINFECTOR.

The disinfector should be placed upon a sheet of tin or upon a tray, and set upon an uncovered table or other firm support in the centre of the room that is to be disinfected. Windows, registers and all other openings must be carefully closed. All cupboards and closets should be opened, and all articles of clothing, bed linen, etc., should be spread out; or, better still, hung up. The keyholes should be stuffed with paper or rags.



The container (r) of the disinfector is now filled with a greater or less number of formalin pastils, in accordance with the necessities of the case. For the disinfection of a medium-sized room, 30 feet long, 10 feet wide, 10 feet high; or, say, 3000 cubic feet, about 100 pastils, or the contents of one package of five boxes are required. The reservoir of the lamp (b) is then filled three-quarters full of alcohol, or if wood alcohol is used it should be only about half filled, and the filler cap is screwed on again. The wicks should be even with the level of the tubes, or at all events should not project more than one mm. (1-24 inch) above them, so that the flames should not be too high and the apparatus not get too hot. For the complete disinfection of larger rooms two disinfectors should be employed.

After all the wicks are lighted the room should be left and the door tighly closed. If the formalin vapor, which is absolutely innocuous, both to men and animals, becomes perceptible in the neighboring rooms, their windows should be opened.

After 12 to 24 hours the windows of the disinfected room should be left open for some time, and the formalin odor will entirely disappear. The vaporization of the for-

mali pastils effects a complete sterilization of the room, killing all, even the most resistant, disease germs; so that the room can be used again for dwelling purposes with perfect confidence.

WELL DONE, BRITON!

It is a source of profound gratification to us to learn that there yet remains some slight leaven of manliness and decency in the medical profession, and that the British Medical Association has lately fearlessly asserted it, in throwing, neck and heels, out of that distinguished organization the unprincipled renegade members,who, in defiance of the united profession of Australia, went out there from England to fill the places of the highly honored practitioners who were summarily removed from their hospital service because, forsooth, they refused to be bossed about by a nurse. We append from the Lancet, of August 10, 1897, note on the subject:

"Two very different incidents in the proceedings deserve a word of notice. The presentation of the gold medals will be generally approved. If an association does not emphasize such services as those of Mr. Wheelhouse and Sir Walter Foster there must be something wrong in it. The award of the Stewart prize to Dr. G. Sims Woodhead and of the Middlemore prize to Dr. Alexander Hill Griffith will be equally approved. The other incident was of a painful character—the expulsion of two practitioners from the membership of the association for having accepted offices under the Government of South Australia, in the General Hospital of Adelaide, vacated by the whole staff as a protest against the conduct of the government. The members so removed had ample opportunities of defending themselves. We cannot wonder at the all but unanimity with which the association acted in this matter. The profession must protect itself, and it would be simply lamentable if a great voluntary association were to be stricken with the same paralysis of discipline which seems to threaten the chartered and statutory authorities."

Now, what is New York doing about the rapacious grab of '95, in which the places of twenty-eight reputable members of hospital staffs were seized on by practitioners in that city in defiance of the united protests of the American profession?

PROFESSIONAL ANIMOSITY.

The controversy that is agitating the columns of the Journal of the American Medical Association, between Drs. Upshur and Woodbridge, proves beyond a doubt that the spirit of brotherly affection which forms such a characteristic portion of the physician's professional life, is, to put it mildly, very latent.

Acrimonious discussion and ungentlemanly insinuations should not enter into scientific investigation. Personalities engendered in a spirit of malice have never yet won a cause. And as educated, enlightened medical men, seeking the truth in order that we may use it for the benefit of suffering humanity, we should be far removed from the petty spites and trivialities which characterize the discussions and debates of illiterate men.

If Dr. Woodbridge has invented or discovered a method for the successful treatment of typhoid fever, then all honor to him, and the whole profession should rejoice in his success, for it means more than a victory for

him alone: it means the saving of thousands of useful, nay, valuable, lives, at the very time of life when such lives are apt to be of the greatest value.

The majority of the cases of typhoid fever occur between 18 and 35, just when the fullest fruition of life appears before ambitious youth.

But if, on the other hand, his system of treatment has been used with ill success by numerous other observers, careful, honest, conscientious men, whose sole object in life is the preservation of health, the prevention of disease and the support of professional honor, then there has been an error of judgment on Dr. Woodbridge's part in considering every successful case he has treated, of fever, to be one of typhoid.

Herein lies another difficulty: Environment, condition of life, constitutional peculiarities, all these, too, have to be considered in determining our prognosis of this or any other disease. The manifestations of typhoid are not always the same, nor does the length of the disease cover the same period in every individual, so that frequently what we attribute to the efficacy of our treatment, is more apt to be due to some systemic peculiarities limiting the encroachment of the disease.

It is this variety in the make-up of the individual that prevents us from reducing the principles of medicine to the accurate basis of scientific data.

The time for establishing an exact science of medicine has not as yet arrived, nor will not until we attain an exact science of man.

It is then the individual and not the disease that confronts us, and though there may be certain broad outlines in every disease which demand attention, back of the disease is the individual.

Our treatment of typhoid, or pneumonia, or numerous other diseases, must mainly, then, be symptomatic and be more of a reconstructive than of a destructive character.

We are in receipt of a most excellent illustrated catalogue of electrical appliances from the McIntosh Battery and Optical Company, of Chicago, which would pay our readers to obtain.

VIRGINIA HOT SPRINGS—ON CHESAPEAKE & OHIO RY.

The Chesapeake & Ohio is in the advanced class of railroads. Its service and system are most adequate and both are maintained in the most exacting manner. From a point of safety it is nearly absolute; for luxury and enjoyment it has no rival. It brings the Hot Springs of Virginia within a night's ride of New York, Philadelphia, Cincinnati or Louisville and eight hours from Washington.

Those who have been charmed with the beauties of the Hot Springs Valley in the summer and fall months,will be no less delighted with the sublimity of its environments and its delightfully rare atmosphere during the winter and early spring. While a great deal of interest at Hot Springs centres in its bathhouse, which has no equal in America, and in the flowing springs of natural hot water, the curative qualities of which are phenomenal, the high class of its patronage renders the place attractive to those who do not visit it simply as a sanitarium. The New Homestead, unquestionably the finest hotel in the mountain regions, is admirably well adapted to all seasons. Few hotels are better fitted to supply every want and gratify every taste.

Riding, driving, cycling and golf which are features of the place, add greatly to the enjoyment of the guest. Indeed it is seldom that the opportunity to combine treatment by thermal waters with pleasure and exercise exists as it does at this ideal resort in the mountains of Virginia.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

ARE X RAYS PRACTICAL?

Shortly before sailing upon my vacation this summer my attention was called to what seemed a rather unwarranted statement in a medical journal representing a large medical association to the effect that X-ray photography is beyond the reach of the average practitioner, and is either surrounded by difficulties or "has no success in the long run."

The writer of the criticism will himself, no doubt, welcome a correction of his erroneous views, and by others who may have read his discouraging remarks the true facts will be appreciated.

The following quotation cites the leading points to which I shall refer:

"The fact remains the same that the authentic photography, while frequently individually successful, has no success in the long run, but most persons who have used it have come to the conclusion that it permits many mistakes and much chagrin for people's benefit by employing a professional photographer to do the work, and in our large cities that is now entirely practical, but before it becomes generally used, the price must be reduced, as it is effectually necessary to make the exposure on three sides in order to obtain a correct notion of the exact nature of the case. * * * * All this is expensive at present rates, but it will doubtless be reduced in time."

The above is not quite plainly expressed, but leads us to infer that the common experience with X rays is disappointing. The fact is that the writer of the above criticism has simply not informed himself in regard to approved methods and learned how easily almost every physician can avail himself of this practical aid to certain forms of diagnosis, an aid absolutely unapproachable in the detection of many conditions beyond the reach of any other method of examination. In ignoring the fluoroscope and assuming that photography affords the sole use of X rays the critic I have quoted leaves us in doubt as to his competency to speak on the subject, for an examination of a fracture can be made from all directions with a good tube and fluoroscope while a single plate was prepared for exposure. To the practiced eye the examination is quick and fairly accurate, while photography is reserved for special cases in which a permanent record is desired. By far the greater part of office X-ray work is now done with the improved fluoroscope—a fact which the critic fails to mention.

Another very important point is the simplicity of the whole thing. Any physician who has a good coil or a good static machine can be taught how to do first-class X-ray work in from two to four hours, no matter if

he has spent many weeks and considerable money in the vain attempt to acquire experience alone. The directions given in my manual of static electricity in X-ray and therapeutic uses are very clear and will assist all who read them, but a brief object-lesson will teach more than written words.

After the publication of my articles on "Crookes' Tubes and Static Machines"and"A Study of Maximum X-Ray Effects," I received numerous letters, both from the various States of this country and from Europe, remarking that the results I reported were "marvelous," and desiring directions for producing them. I do not wish to have any results reported by me regarded as "marvelous," for they are simply what all others can procure who employ the same tubes and methods. Notwithstanding statements to the effect that very few are able to do fine X-ray work, I repeat my frequent declaration that all who possess apparatus can be taught quickly and easily how to use it with satisfaction, for it is a very simple matter. My book was written to instruct those who need it, and as it describes actual work and not untried theory, it is not an argument "to sustain his side of the question," as a critic states, but is a demonstration in practical technique.

With this book in hand, the average physician can guide himself to success, or if he is able to visit New York he can save time and friction by taking a single object lesson of a couple of hours only. I will take this opportunity to reply to correspondents whose letters have accumulated during my absence abroad, and who ask for information regarding instruction in X-ray work.

The chief secret of success is the art of manipulating the vacuum state of a given tube. In a single session of about two or three hours, I instruct the physician how to select a proper tube, to choose a good tube and discard all poor ones, to make such tests at once make plain the exact quality, condition and capacity of the selected tube, and determine the best method of operating it. I teach the physician how to interpret the appearances in the tube so far as they indicate its efficiency, to develop the fullest capacity of any tube that will work at all, and to properly appreciate and forever after understand what a high-efficiency tube can be made to do. In every case I prepare the student to do all that I can do myself, and he can return home and repeat the same results in his own office. To those who have read of striking results and desire, but fail, to equal them, there is no way so simple as to devote part of an afternoon to being shown how. During the past season the number who became interested in X rays, but disappointed themselves in attempting to work a tube unaided, was, no doubt, large, but when it is known how easily expert skill can be obtained, the majority of active practitioners will employ the fluoroscope, even if they rarely take a negative. It is well that so indispensable an instrument as the Crookes' tube has proved itself to be is not out of reach of the general profession. Nearly all can be quickly instructed how to produce its best effects and how to use the best fluoroscope. With the improvement in tubes there is now little breakage, and at a small expense the physician who already possesses the electrical current can equip himself to equal the best X-ray work now done anywhere.

In closing these remarks it may be well to say that there is absolutely no cause for any hesitation to employ X rays on account of alleged or actual injuries caused in the past. Alarm on that account is as preposterous as would be a refusal to prescribe calomel because bichloride of mercury in pound quantities is a poison. The proper use of X rays will never cause any trouble. This is as certain as that any tool ever made by man can be abused. Even abuse of X-rays is difficult, for they are very safe and harmless things.

Clinical Medicine.

In charge of DR. J. J. MORRISSEY.

FATAL POLYNEURITIS.

Brauer (Berl. klin. Woch.) discusses a case occuring in a syphilitic patient treated with mercury. A man, aged 24, acquired syphilis in the beginning of August, 1895, and was treated with a five weeks' course of mercurial injections shortly afterward. At first three grammes, and later five grammes, were used daily. There was no stomatitis or salivation. Toward the end of the five weeks he experienced a feeling of numbness in the fingers, and the arms became weak, but the legs were unaffected. The mercury was at once stopped, but as he was going home he experienced some unsteadiness in his gait. On the second day the legs became weak, and on the third day there was some unsteadiness in his speech. Deflutition was also difficult. He steadily became worse, and on October 9 secondary syphilitic affection appeared. For this he was treated with injections of salicylate of mercury. The syphilide disappeared, but the nervous symptoms became aggravated. When admitted into the medical wards there was a well-marked paresis of both arms and legs. No muscles were completely paralyzed. The movements were ataxic. There was impairment of sensation, but no pains. The patellar reflexes disappeared. Coarse fibrillary twitchings were present in the affected muscles. There was a partial reaction of degeneration. The sphincters were easily disturbed, and there was moderate constipation. Suffocative attacks supervened, and the diaphragm was found paralyzed on January 19. Death resulted from pneumonia.

Marked pathological changes were found in the nerves, consisting of degeneration in the medullary sheath, and a slight proliferation in the interstitial tissue. The axis cylinders were slightly swollen in places. There was no disease in the nerve roots and no pathological changes in the minute arteries. The brain and spinal cord were intact. The muscles only showed slight morbid changes. There was no other possible cause of the neuritis than recent syphilis and mercurial intoxication. In syphilis the nervous system may be involved, either by the specific syphilitic lesion, or by changes caused by toxins in the blood. A true syphilitic infection could be excluded with certainty. The slight changes in the interstitial tissue in the nerves were in all probability due to the degeneration in the parenclymatous elements. Syphilitic neuritis does not occur in so widespread and symmetrical a form. Finally, syphilitic nervous affections rarely supervene at a time when syphilitic manifestations are disappearing under anti-syphilitic treatment.

Kuss (These de Paris, 1897), maintains that among the various causes of true asthmatic dyspnoea, the principal is a defective evaporation caused by a want of sufficient fluid in the epithelial cells of the pulmonary vesicles. This insufficiency of fluid must be attributed to the reflex affection, from various causes, of the vaso-mo-

tor nerves governing the nutrition of the cells, and produces the same effect as a sudden and considerable reduction in area of the pulmonary surface. The convulsive action of the respiratory muscles might easily be a consequence of this dyspneic condition. In the treatment of asthma (1) increased activity must be given to the secretory powers of the epithelial cells by acting on the secretory (vasomotor) nerves; (2) the determining cause of the harmful reflexes must be obviated by various recognizable methods; (3) the physiological and anatomical soundness of the alveolar walls should be maintained by proper nutrition.

MILKY-WHITE NON-CHYLOUS ASCITES.

Apert (Bull, de la Soc. Anat., Paris, 1897; p. 187), gives an account of a case in which the ascitic fluid exactly resembled chylous ascites to the naked eye, but microscopically did not contain fat globules, and chemically a very small quantity of fat was found. The specific gravity was high, and the quantity of albumen large. Cultures made from the fluid remained sterile, and it was not altered by filtration. No clotting or separation into distinct layers took place on standing. Such cases are rare; previous recorded cases are those of Lion, Achard and Sainton.

SALICYLATES IN RHEUMATISM.

The salicylic acid must be obtained from the vegetable kingdom; it must be given without an alkali or a base; from forty to eighty grains should be given daily for ten days; the patient's diet should consist of milk and farinaceous food for at least a week; the bowels should be freely opened daily.

—Latham.

TREATMENT OF CARDIAC DISEASE.

In strychnine we have an ideal cardiac stimulant, which not only acts upon the circulation, but as well upon respiration, digestion and assimilation. It is especially indicated in the weak heart of pneumonia and febrile processes, given hypodermically in one-thirtieth to one-tenth grain doses, repeated until some sign of the drug is manifested. It is also useful to relieve the alarming symptoms which occur in surgical anesthesia, in the cardiac weakness often associated with neurasthenia, and in that due to depressed nerve-force. Strophanthus is of great value as a cardiac sedative in that form of tachycardia so common in exophthalmic goitre. These two drugs will retain their supremacy because of their influence over the vital centres in the medulla, to which the various systems of the body look for support and encouragement.

—Krauss.

STRANGULATED HERNIA.

After several days of futile efforts at reduction the patient was placed upon the back with the hips raised and the legs flexed. At intervals of ten minutes two teaspoonfuls of sulphuric ether were poured over the tumor and strangulated parts. The surrounding skin was protected by vaseline. Slight efforts at reduction were made at first; the tumor gradually diminished beneath the hand on making gentle pressure, and at the end of half an hour had completely disappeared.

—Friedlander, Wiener Med. Woch.

TYPHOID FEVER.

1. Typhoid fever occurs more frequently in children than is generally supposed. 2. The fact that ulceration and hemorrhage is much less frequent would explain the absence of pronounced abdominal symptoms. 3. The erratic, undeveloped and hypersensitive nerve centres in early child life explain why the toxic secretions of the Eberth bacillus should make cerebral symptoms very pronounced. 4. Given a child of any age, with or without intestinal disturbance, with a continued elevated temperature, with or without evidence of cerebral disturbance, the possibility of the presence of the Eberth bacillus of typhoid fever should be constantly kept in mind.

—Journal of the American Medical Association.

Current Medical Literature.

ACUTE NEPHRITIS.

Ebstein (Deut. med. Woch., June 10, 1897) discusses acute nephritis occurring as a complication of chronic gastro-enteritis, and relates a case in a woman aged 27. Here there was no other cause for the disease either in past illnesses or in family predisposition. She had suffered from diarrhoea for nine months, and from pain in the gastric region and loss of appetite for six months. She suffered from tapeworm, but as to whether this was the cause of some of these symptoms there was some doubt. The nephritis arose most acutely, and proved fatal in a few days from eclampsia, coma and collapse. During the illness small hemorrhages occurred in the subcutaneous tissue. At the necropsy a tapeworm was found in the intestine. There was a follicular enteritis with ulcers and enlargement of the mesenteric glands. The spleen was quite normal. The kidneys presented the appearances of an acute nephritis. The other organs were healthy. It was only on the third day after admission that a small quantity of albumen appeared in the urine. Later abundant casts were found. The asthmatic attacks present were uremic in character. As regards any other possible cause for the nephritis, except the gastro-enteritis, it must be mentioned that there was no ground whatever for thinking that the patient had influenza. There were no symptoms of an acute infective illness; there was no fever and no splenic enlargement. The author is of the opinion that the suddenly oncoming nephritis was due to an intoxication from the alimentary canal. The severity of the nephritis arising in cholera is well known. In acute intestinal catarrh renal symptoms may appear, but in cases of chronic catarrh the condition of the urine has not been carefully observed. In this case the stools were very light, but contained no fat. The author records this case to draw attention to the possible occurrence of acute nephritis as a complication of chronic gastro-intestinal catarrh.

SWELLING OF THE PAROTIDS IN UREMIA.

Richardiere (Journal de Med., March 10, 1897) describes this condition, which has not attracted very much attention. Swelling of the parotids is well known in certain intoxications, such as mercury, arsenic, etc., and in uremia, which may be looked upon as a typical intoxication, it is also observed. The author relates a case of uremic poisoning with dyspnea and cephalalgia, in the course of which there was pain at the angle of the jaw, accompanied by swelling of the parotid region. Both parotids were attacked at the same time. The swelling lasted four to five days and then completely disappeared. These parotid complications in uremia may be due to two causes—greatly increased secretion or chemical modifications thereof. Increased secretion is a frequent occurrence of uremia, and a large number of cases of ptyalism are recorded, and in a case observed by Barie 900 g. of saliva were secreted in 24 hours. In

the author's case there were no increased parotid secretions nor ptyalism, and in this instance, therefore, the parotid lesion would seem to be due to chemical alteration in the saliva. It is known also that in cases of deficient renal action the saliva contains a large amount of urea, and the parotid would therefore seem to have a certain vicarious action in some cases of renal disease.

THE CAUSATION OF THE PRESYSTOLIC MURMUR.

Brockbank (Med. Chron., June, 1897) discusses at length the cause and rhythm of the cardiac murmur ordinarily styled presystolic, but which he prefers to define as a crescendo bruit rapidly ascending in pitch, and terminating abruptly with the closure of the mitral valve. He states that two theories of its origin have been put forward. The first was originally suggested by Fauvel in 1843, and holds that the murmur results from the forcing of blood through a stenosed mitral orifice by a hypertrophied left auricle, aided by the aspirating force of the ventricle in diastole. The second, devised by Ormrod in 1864, is that the murmur is produced by blood regurgitating through the stiff rim of the valve orifice before sufficient force is generated in the ventricle to close the valve. The most recent supporter of the first theory is Sansom, of the second Dickinson. The author propounds a third explanation, namely, that the murmur is caused by blood rushing through a gradually but rapidly diminishing stiff-rimmed, narrowed, mitral valve under a progressively increasing pressure. He illustrates this by the effect of compressing with one's teeth or lips an india-rubber tube through which one is blowing. He agrees with Dickinson's view that the accentuated first sound is due to the hard edges of the stenosed valve being forced together by the pressure of ventricular systole. The author claims to be able to differentiate the abrupt wooden quality of this sound from the more ringing accentuated sound produced by the systole of the right ventricle, and often associated with the other. Admitting that the "presystolic" bruit is produced by blood rushing through a closing orifice, he next takes up the question whether the closure is the result of aurcular or of ventricular action. Even in health he believes it to be due not only to the pressure of the blood, but also to a preliminary contraction of the extreme apex of the ventricle, which he describes as preceding the general systole of that chamber. When the mitral valve is thickened a greater force is required to close it; and Brockbank regards it as more probable that this should be provided by the ventricle than by the hypertrophied auricle. If the force is ventricular in origin he considers that some blood will regurgitate through the stiff orifice before the intraventricular blood pressure is raised high enough to overcome the resistance of the diseased valve. He hence concludes that the murmur ordinarily known as presystolic is really early systolic, and is due to regurgitation through a stenosed mitral orifice in the early stages of ventricular systole.

OBESITY AND GIGANTISM IN A CHILD OF FOUR.

Capitan and Croizier (Campt. Rend. Hebd. Soc. de Biologie, April 2, 1897) record the case of a boy aged 4 years and 4 months who measured 108 cm. (instead of 92 cm.) in height, and weighed 51 kilogrammes (instead of the normal 14 kilogrammes). He was in other respects quite normal, showed no signs of myxedema, and had no arthritic heredity. Before his birth his mother had had a child that died in a few months from congenital weakness. At his birth he weighed 10 pounds, in four months 18 pounds and during a year he increased in weight at the rate of four pounds a month. Latterly he has gained two pounds a month. The authors regarded it as an instance of gigantism with precocious obesity.

SYPHILIS INSONTIUM.

Lesser (Berl. klin. Woch., July 12, 1897) divides unmerited syphilis into (1) congenital syphilis, (2) spyhilis

contracted in legitimate sexual intercourse, and (3) syphilis contracted by direct or indirect contact with the syphilis virus exclusive of sexual intercourse. It is the last-named group which Lesser chiefly describes here. Of course every extra-genital chancre must not be placed in this group. The author maintains that in a large number of cases of syphilis apparently contracted in shaving, a wound has been subsequently inoculated by kissing. The last group of unmerited syphilis may be divided into that conveyed (1) by direct personal contact, (2) by indirect means, and (3) by and to medical men in their professional work. In the first group are included cases in which syphilis is conveyed from one child to another or from a child to an adult. Here kissing is the most important cause, but syphilis due to suckling also falls under this heading. Many objects may be the means of indirectly conveying syphilis, such as those used for eating and drinking purposes. On the tonsil it is not necessary to have a breach of surface for the infection to take place. In the third sub-group the medical man may be the means of conveying the disease, as in various operations, as by inoculation and injection, by catheterization of the Eustachian tube, by the use of caustics, etc. Medical men or nurses may contract the disease themselves as in syphilis technica. There are other cases in which the cause of the infection cannot be ascertained. The diagnosis in unmerited syphilis may be very difficult; in the author's opinion the extragenital primary lesion is in the majority of cases overlooked. Again, the non-recognition of the disease may lead to its further transference. Patients with ordinary syphilis mostly know the disease and are more or less careful not to convey it to others. Of course the disease is originally derived from an ordinary case, but unmerited syphilis may under conditions lose the character of a disease of the generative organs. Notwithstanding that the number of cases of syphilis contracted in the ordinary way far exceed those of unmerited syphilis, yet something can be accomplished in prophylaxis by speedy diagnosis and treatment, and especially by preventing the further spread of unmerited syphilis.

THE NEW TUBERCULIN.

Professor Juan L. Hohr, of Cadiz, (Anales Medicos Gaditanos, July 15) reports four cases treated with Koch's new tuberculin. 1. Boy aged 7 years suffering from Pott's disease and tuberculous osteitis of the femur. There was a fistula with scanty discharge, with pain in the limb so severe as to prevent sleep, and great weakness. On April 21 one c.cm. of the 1-500 solution, and on the 23d two c.cm., were injected. The immediate result was increase of suppuration and cessation of the pain. Further injections were followed by rise of temperature, sleeplessness and loss of appetite, and they were discontinued for two or three weeks. The treatment was then resumed, but the febrile symptoms produced were so marked and showed such persistence that it was again abandoned. The sole benefit observed in this case was the total cessation of pain. 2. A man aged 23 with pulmonary tuberculosis at both apices. Injections of the 1-500 solution caused increase of cough and diminution of appetite; the febrile reaction caused by the tuberculin continued for some days after the injection. 3. A man aged 31 with tuberculous adenitis of the cervical glands and ulcers on the neck and shoulders; no chest symptoms. Injections of one and two c.cm. of the 1-500 solution were followed by the development of sharp catarrh with abundant discharge and cough. The effect of the tuberculin on the diseased parts in the neck was to set up inflammation in the scars of old ulcers, which quickly broke down, exposing caseous material which was eliminated in a few days. But new points of ulceration appeared in the neck, and at the same time chest symptoms developed to such an extent that it appeared that the disease had been kindled in several foci. On the injections being discontinued the patient regained his strength, and the ulcers healed under surgical treatment. 4. A woman

aged 36 suffering from superficial lupus of the nose and upper lip, which were the seat of scars; the disease was of eight years' standing. There was a fresh patch on the chin and another along the jaw. Injections (one and two c.cm.) of the 1-500 solution caused disappearance of the redness around the patches, but the patient complained of great weakness and pain in the limbs and of feeling "ill all over." The treatment was therefore discontinued. The author's experience leads him to conclude that the new tuberculin, even in the highest degree of dilution, always causes reaction, though the intensity may vary. Koch's statements cannot, he thinks, be reconciled with clinical facts, and he considers the new tuberculin "impossible" as a therapeutic agent.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

ON THE IMMEDIATE REDUCTION OF THE ANGULAR DEFORMITY OF SPINAL CARIES.

By Robert Jones, F. R. C. S. E., and A. H. Tubby, M. S. Lond., F. R. C. S. Eng.

Our attention having been drawn to this matter by an account of some cases of angular deformity of the spine arising from caries, which had been treated by immediate reduction by Calot, of Berek-sur-Mer, and Redard, of Paris, we deemed it expedient to satisfy ourselves as to its feasibility and safety.

We must confess that we regarded the accounts received from France in a somewhat sceptical spirit, being considerably embarrassed and influenced by the authoritative statements contained in textbooks, that the only safe way of treating carious disease of the spine is by a long course of rest, every effort, of course, being made to prevent deformity in the early stages by complete recumbency, and in the later stages by suitable supports. But that when deformity follows, as it very frequently does in spite of all the precautions, it must be accepted as a lamentable but unavoidable sequence of the disease.

Then, again, to us it seemed probable that the immediate result of forcible rectification might be paralysis, or at least paresis, temporary or long continued; and arguing on the analogy of what has sometimes occurred after reposition of limbs subsequently to tuberculous arthritis, we felt it was possible that so novel a proceeding in the spine might be followed either by suppuration or by an acute dissemination of tubercle. But when we come to reflect on our experience in dealing with a large number of these articular cases, we could not altogether recall more than three or four cases in which it could be distinctly affirmed that forcible rectification and acute dissemination of tubercle stood in the relationship of cause and effect. Nor has our combined experience been small.

With the statements, therefore, of the French surgeons Calot and Redard before us, and duly considering the various possibilities, we decided to put the question to a cautious trial. After personal observation of the methods adopted in the clinics abroad, and noting the details, we commenced to operate. During the last two months we have together treated eleven cases of angular deformity. In six of them we obtained immediate and complete reduction. In two of these cases, which were extremely deformed, the reduction was very remarkable on account of the facility with which it was effected. In five of the eleven cases we obtained partial reduction, and of these latter cases in three of them the an-

gle was sharp, and the area of disease limited to two or three vertebrae. In the remaining two it was prominent, but obtuse, and extended over six or seven vertebrae, and was accompanied by much thickening of the tissues at the site of disease.

Among the five cases of partial reduction were the two on which we first tried this method, and we felt it to be unwise to use such force at the first sitting as we now know to be necessary to completely reduce the deformity. The remaining three cases of partial reduction were so consolidated as to resist a large amount of force. But we can say that in all five, although the deformity was not entirely reduced, there was considerable lessening of the projection, we should say about three-fourths; and what is very much to the point there was an increase in the length of the spinal column from an inch upwards. This lengthening was not due to mere extensibility of the normal portion of the spine, a source of fallacy we took care to guard against in our measurements, but to the unfolding of the spine at the site of former disease.

Our method follows that of Calot, and in view of the difficulty of sometimes obtaining a sufficient number of assistants we have devised a special apparatus, by which traction is simultaneously made upon the head, arms and legs. After steady extension of the spine, either by the aid of assistants or by the apparatus, for a few minutes, with the patient in the prone position, care being taken that the pull should be equal in all directions, downward pressure is made by the surgeon's hands upon the projections, counter-pressure being afforded by the open palms of an assistant placed on the abdomen. It is advisable to have the patient's bowels well emptied before the operation, and then the assistant's hands readily support the anterior aspect of the spine, and so prevent too rapid reduction of the deformity. When the projection is dorsal, counter-pressure can be indirectly made through the chest walls. The patient is kept under an anesthetic from the first, and as this must be administered while he or she is in the prone position, it is a little difficult. But we have found that it is better to get the patient well under before proceeding to operate, and then but little more is required after the prone position is assumed.

Reduction, partial or complete, having been obtained, a plaster of paris corset is put on, and is carried up over the head and neck, merely leaving the face exposed, care being taken that pressure is maintained during the application of the jacket on the site of deformity. It is well to note that a very important point in the adjustment of the plaster of paris corset is that the spine must be maintained in hyper-extension. We have found it easier to put the bandages on the head and neck if the patient is suspended from a Sayre's apparatus.

Now as to results. In not one of the cases, despite the complete or partial reduction of the deformity, has there been either paresis or paralysis following the operation, nor has there been in four cases which have been carefully watched for two months any untoward signs, either of suppuration or a renewed outbreak of tubercle in those cases in which we presumed it to be the fons et origo mali. And our experiences accord with those of Calot, who has gone a step further and excised some of the projected lamine. We should mention that in some cases we have used a modification of the double Thomas' hip-splint, with a head-rest and leg-support, so constructed as to keep the spine in extension.

We submit, then, that, although the method is still on its trial as to its ultimate results, it seems to afford a good prospect of reducing the deformity without incurring dangerous consequences. This article should, however, be regarded as a preliminary statement. We hope to publish a more detailed account of the cases in a few months' time. At any rate, the lesson which has been brought home to us is that the correct way of preventing deformity from arising or increasing in Pott's disease is to maintain the spine in hyper-extension by suitable support

beneath it, and not simply to place the patient upon a bed or straight splint, which favors rugging of the spine at the site of disease and increase of intervertebral pressure.

In conclusion, once we can be fully assured that no symptoms of a serious character follow these manipulations, it becomes an easy matter when the spine is rectified to maintain it in the corrected position.

—The British Medical Journal, Aug. 7, 1897.

NOTE.

The above entire article we copy, as it strikes us as most extraordinary in many particulars. How, indeed, we apply principles to the vertebral columns ruled out, in the extremities, strikes one as rather remarkable. In fact, violent forcible rectification of a joint in an extremity distorted by tuberculosis, breaking down of the osseous and ligamentous structures, is everything but rational or safe surgery.

However, these are days of wonders, and possibly, though the spine be a highly specialized organ, it may turn out that it will bear, with impunity, such force as would be destructive to an extremity.

In an extensive series of experiments of the spines of animals, made by us, it was curious to note that in many instances they were fractured and refractured, in some few hemorrhage following into the abdominal and pleural cavities, yet no symptoms of paralysis followed and recovery was prompt. T. H. M.

PATHOGENY OF RELAPSING APPENDICITIS.

Mdlle. Von Mayer (Rev. Med. de la Suisse Rom, April 20, 1897) finds that none of the older theories as to the cause of relapsing appendicitis, such as its being due to tuberculous, dysenteric or typhoid ulcers, are borne out by statistics. Roux, in 1895, was the first to bring forward the theory that micro-organisms find a suitable nidus in which to remain latent in the adenoid structures of the appendix and in residual cicatrices and adhesions. The author has endeavored to prove this theory, and has examined 40 appendices directly after removal during life. 1. Bacteriology of the secretions from the lumen, perforations, empyemata and extra-appendicular abscesses. Plate cultures from these remained sterile in more than half the cases (25). The non-sterile cases produced very diverse organisms, various bacilli and diplococci. 2. Bacteriology of sections. Micro-organisms were found localized in the thickened serosa, in the lymphatic spaces of all the layers of the appendix, and even in the non-ulcerated mucosa, in adhesions, etc., in 51 per cent. of the cases (23 times). These latent organisms were present, not only in appendices removed in the quiescent stage six to eight weeks after an attack, but sometimes in those removed eight months after. On the other hand, cases where no bacteria were present in the tissues (17 cases) included some of those removed only three to six months after, or even during an attack. Either the bacteria had perished or more probably were absent from the special portions of tissue examined. An acute outbreak always starts in the remains of inflammation; cicatricial foci being more easily penetrated by micro-organisms than healthy tissues. As regards the kind of organism present in the tissues, the B. coli was found in two cases, B. coli with other organisms in one, and the tubercle bacillus in one. In the remaining 19 cases the bacillus described by Tavel and Lanz in their work on the etiology of peritonitis was present, either alone or with the coccus conglomeratus. The author concludes: 1. The principal causes of relapses are micro-organisms, which are latent in the thickened walls of the appendix, in fibrous strictures of it, and in peri-appendicular adhesions. 2. After one attack the whole appendix remains a locus resistentiae minoris, even if there has been an apparently complete restitutio ad integrum. There is left either a stricture, a cicatrix, adhesions, or an incomplete restoration of the mucosa, together with constant fatty degeneration of all its tissues, which, infected during the

first attack, remain infected, as proved by microscopical examinations. 3. These alterations in structure are accompanied constantly by a new formation and dilatation of vessels, which favor active and passive congestion from slight causes, whereby the tissues lose their power of resistance, and, the latent organisms again becoming pathogenic, a relapse occurs. 4. The organisms found in the secretions generally differ from those in the tissues. This possibly points to symbiosis and a mixed infection during the acute relapse in many cases.

SILK OR CATGUT IN ABDOMINAL SECTION?

Reclus (Gazette des Hopitaux, July 10, 1897) insists that catgut is better for ligatures than silk, especially in total hysterectomy, where they are left hanging out into the vagina. Silk remains in place indefinitely, and is very liable to become infected. Reclus reports that in the West of France a woman who had undergone hysterectomy fifteen months previously, he himself being the operator, suffers still from suppuration due to a silk thread, with which her doctor says has kept up a trifling but intractable suppuration. On that account Reclus has discarded silk.

THE RADICAL CURE OF HERNIA BY ZINC CHLORIDE INJECTIONS.

Demars (Sem. Med., May 8, 1897) showed six cases of hernia before the Academie des Sciences in support of Lannelongue's method of injecting chloride of zinc (vide Epitome, vol. i, 1897, par. 281), three of which were boys aged from 5 to 7 years and three girls aged 6 to 15. In one girl and one boy the hernia was congenital. All the herniae were cured. In the girl of 15, some months after the cure of a congential, a direct inguinal hernia appeared. The original operation consisted in three injections of 12 to 15 drops of a 10 per cent. zinc chloride solution into the external pillar of the ring and three internally towards the pubes. This case proves the value of the method, since the original weak spot did not give way. It also shows that Malgaigne's theory that a special predisposition of the abdominal walls is present in cases of hernia is correct. The edema of the scrotum and testicles following the injections appears to be of no importance. At the same meeting Lannelongue stated that on April 14, 1897, he had seen all the five cases of inguinal hernia treated by his sclerogenic method, shown before the Academy of Medecine in July, 1896. In all the cure remained complete, and their condition was better than any open operation could obtain. Comparing the open with his operation everything was in favor of the latter, as regards final result, danger of the operation and the ease and quickness with which it could be performed.

TERATOMA OF THE NECK SIMULATING CYSTIC BRONCHOCELE.

Swoboda (Wein. klin. Woch., November 12, 1896) records the case of a child which was born with a tumor of the left side of the neck reaching from the lobe of the ear to the clavicle, and from the middle line in front to the sternomastoid, and rendering the circumference of the neck nearly half as large again as the normal. The tumor was hard and elastic, but in one or two places fluctuation could be felt in it. Respiration and swallowing were not obstructed, but after long-continued crying some respiratory stridor could be detected. The swelling grew rapidly, but the child, though feeding greedily, remained very thin and dyspeptic; attacks of severe dyspnea came on after prolonged crying or sucking. Fearing the effects of injection or puncture, Swoboda removed the growth, the patient being at the time eleven weeks old. During the operation the child became asphyxiated, and was restored

only by artificial respiration, subsequently became aphonic, but this passed off in about ten days; the probable cause of these symptoms was crushing of the right recurrent laryngeal nerve by a pair of pressure forceps; otherwise recovery was rapid, and the patient had gained one-twelfth in weight fifty days after the operation. The central fluctuating part of the tumor burst during removal, allowing a puriform fluid to escape; no micro-organisms could, however, be detected either in this or in any portion of the growth. The microscopical structure of the latter was most extraordinary; it consisted mainly of neuralgia, with glia cells and ganglion cells, the whole being traversed by bands of connective tissue. It must, therefore, be classified under the teratomata as a ganglionic glioma, a growth which has never before been observed outside the central nervous system. In some parts there was leucocytic and fatty degeneration, and near one edge thyroid tissue was observed; this, however, did not belong to the tumor proper, but had become imprisoned in it in the course of growth. It should be added that the histological investigation was made by Weichselbaum.

THE ETIOLOGY OF TUMORS OF THE KIDNEY.

Ricker (Centralbl. f. allgem. Pathologie, June 1, 1897) has devoted two years to the study of this subject, which has received so great an impetus since the discovery of the suprarenal origin of so many kidney growths. In certain cases in which there was an abnormal nearness of the suprarenal body to the kidney he found renal tumors in the suprarenal tumors in the kidney. No satisfactory explanation is as yet forthcoming of the simple cysts found attached to the capsules of perfectly normal kidneys—for example, in children—but it is possible that some of them may be traced to suprarenal rudiments. Of the non-malignant tumors he mentions first the tubular adenoma, which appears as a cortical growth apparently arising from the tubules of the medulla, or rather from their "rests." The next group which he considers is the trabecular cystoma, of which he traces the evolution in a continuous series, from the simple kidney cyst with club-shaped epithelium. In this develop trabeculae, first simply of connective tissue, but later containing capillaries. These tumors thus arise in and from normal kidneys; a small proportion may, however, develop as the result of obstruction of the ducts from senile change. There is also a third variety of kidney tumor, which differs from the last in the following respects: It is sub-capsular and of variable size, but rare and solitary, whereas the cystoma is common and often multiple. It is solid in structure and often shows early degeneration, cavities, the cystoma being truly cystic with trabeculae composed at first of connective tissue and capillaries, later of capillaries alone. It is composed of rows of cells, which point freely with capillaries, from which, however, they are separated by thin connective tissue. The cells are polygonal, and generally, but not invariably, fat; then tend to the formation of giant cells. In the trabecular cystoma the cells form a single layer of highly cylindrical epithelium, and invariably contain fat. This last group of kidney tumor Ricker considers to be indubitably suprarenal in origin. He adduces in favor of this view the apparently capillary origin and the great resemblance which the tumors have to the suprarenal body. Although the origin of the trabecular cystoma appears to be purely renal, yet he considers that it has affinities, on the one hand, with the suprarenal tumors—as shown by the fat which it contains—and on the other hand, the perivascular sarcomata.

Current Literature in Obstetrics and Gynecology.

PREGNANCY AND FIBROIDS.

Keiffer (Sem. Med., May 7, 1897) discussed before the Obstetrical Society of France the special indications for the treatment of pregnancy and parturition when complicated by fibrous tumors of the uterus. In pregnancy there are risks of miscarriage, of hemorrhage, of premature birth, of abnormal presentations, of placenta previa, of dystocia through excessive development of the tumor, of various degenerations, of dangerous compression of the pelvic or abdominal organs, of ascites, etc. The premature death of the fetus forms in conjunction with these accidents an additional source of danger. On the other hand the tumor may follow the physiological modifications of normal uterine tissue, and act like the latter in all respects; in such a case curetting of the uterus after miscarriage is possible. Should the pregnancy reach its normal termination hemorrhage may be met in the ordinary way, podalic version can be performed or instrumental delivery effected as best suited to the case, or the tumor causing the dystocia may be removed either by laparotomy or per vaginam. Extirpation of the whole organ may be possible in the worst cases. Whatever may be the percentage of accidents in such cases, it is enough to show that the woman can be delivered, and may give birth to a living child, to make it easy to refuse hysterectomy. Mere curetting seems to be enough to deprive fibromata complicating pregnancy of most of their dangers. The method of treating severe hemorrhage by hypodermic and intravenous injections of artificial serum has also contributed largely to this result. Curetting has not only a beneficial action on the tendency to hemorrhage, but protects the uterus against saprophytic or microbial infections, to which the presence of an imperfectly vascularized neoplasm renders it more prone. As regards general treatment, the diet should be regulated, rest enjoined, and hydrastinine and kindred substances should be administered. In advanced pregnancy the amount of obstruction by the tumor will determine the procedure necessary for safe delivery. During labor abnormal presentation or the presence of dystocia will indicate whether version should be performed; in the latter condition version is the most advantageous mode of extraction. Removal of the fibroma is advisable when it in itself constitutes the main obstacle to delivery, and when it is subperitoneal, pedunculated, or easy of access. Either variety of pelvotomy is indicated when the tumor is in the lower uterine segment, and the diameter of the bony pelvis so reduced thereby that the alternative is a Cesarian section. Total extirpation of the uterus and appendages is indicated (1) when the tumor independently of the pregnancy calls for operation; (2) when pregnancy is arrested and delivery impossible; (3) when there is suppuration following retained placenta; (4) after Cesarean section necessitated by fibrous tumors.

TUBERCULOSIS OF THE OVARY.

Orthmann (Centralb. f. Gynak, No. 22, 1897) endeavors to make this subject fairly clear from a clinical point of view. He has collected 177 cases. Only 57 were carefully submitted to microscopic research; of these 48 seemed to be instances of pure ovarian tuberculosis, bilateral in more than half (27) the cases. The remaining nine were tuberculous ovarian cysts. In spite of theories of infection from the outer entrance of the genital tract, and notwithstanding the tendency of pathologists to make out primary disease where it has not been detected before. Orthmann declares that primary tuberculosis of the ovary has never been satisfactorily distinguished in woman, though Acconci and Schottlander have experimentally produced it in animals. In the 48 cases above noted as pure tubercle of a previously sound ovary, infection was traced from the Fallopian tube in 26, and from the peritoneum in 22. The disease may appear as tuberculous perioophoritis, disseminated or diffused, and as miliary tubercle of the substance of the ovary (20 out of 48 cases), cheesy tubercle or tuberculous abscess. The two latter are about equally common. The former, much more frequent, may pass undetected by the naked eye, but the disease shows its features very characteristically under the microscope. In the 48 cases, tubercle bacilli were detected nine times by the microscope and four times by experiments on animals. Orthmann describes four new cases under his own care. In one there was distinct tuberculosis of the yellow substance in a corpus luteum.

VERATRUM VIRIDE IN PUERPERAL CONVULSIONS.

W. H. Thayer (Boston Med. and Surg. Journ., April 1, 1897) speaks highly of veratrum viride both in puerperal convulsions and in the convulsions of children. He gives it in full doses—one drachm of the tincture. It was first used in this way by Fearn, of Brooklyn, in 1869, and has since been steadily, if slowly, gaining favor. It reduces the high rate of the pulse to 60 or under without any depression, for the strength of the beat is maintained.

RETENTION OF URINE AND PREGNANCY AT THE FIFTH MONTH.

Lugeol (Journ. de Med. de Bordeaux, April 4, 1897) has met with a case of retention of urine at the fifth month of pregnancy, in which the usual causes (displacements of the uterus or malformations) were absent. The patient was a widow 34 years of age who had remarried six months previously, and was pregnant for the first time. She had the usual signs of pregnancy, but the abdomen was larger than it ought to have been for the term arrived at. A spherical tumor was felt in the middle line reaching as high up as the epigastrium. No fetal heart was heard. The woman stated that she passed urine in large quantity, and that it even came away involuntarily. Four litres of dark-colored ammoniacal urine were drawn off with the catheter, and the abdominal tumor had disappeared, a five months' pregnant uterus taking its place. The fetal heart could now be easily heard. Lugeol adduces as a possible cause the habit which the patient had some time ago acquired of retaining her urine for long periods in order to suit her work.

Therapeutical Progress.

LESIONS PRODUCED BY THYROID EXTRACT.

H. J. Berkley (Bulletin of the Johns Hopkins Hospital, July, 1897) has investigated the various lesions induced by the action of thyroid extract on the cortical nerve cells. Taking into consideration the very grave symptoms of a toxemic nature observed in so many cases of thyroid administration, more particularly those involving cerebral and vasomotor functions, the author undertook a series of observations with the view of ascertaining the nature of the lesions. The first portion of the investigation was made upon patients in an insane asylum. In each case a pill containing five gr. of fresh sheep's gland was administered daily, which was subsequently increased to two or three, depending upon the results. There was loss of weight, tachycardia and enfeeblement of the cardiac action in each instance, with increase of cutaneous transpiration, irritability and more or less mental and motor excitement. This occurred in all cases, no matter how depressed or demented the patients had been previous to the administration. One patient died before the excitement had subsided, with evidence of acute tuberculosis, and the others showed an edematous condition of the integument of the forehead and cheeks similar to that observed in myxedema. All showed more or less restlessness, with both mental and motor excitement, and in some instances there was considerable mental improvement, though not in all. In view, therfore, of the effect on the mental condition of the same patients, it was decided to administer thyroid to animals in order to examine their nerve tissues. Five mice and three guinea-pigs were treated with thyroid extract. In the case of the mice there was swelling of the face, some emaciation and loss of strength. In the guinea-pigs the general symptoms were similar, and in all cases the administration was continued till the animal died. Microscopic examination of the cerebrum was made in all cases, both with the silver phosphomolybdate and other staining methods; no lesion was found of either nerve elements or neuroglia; there was no varicose or atrophied dendrites or loss of gemmulae. The corpora showed no loss of angularity, and the axons and appendages were all healthy. No nuclear change in the cells could be ascertained, and the blood vessels were carefully examined without the discovery of any lesion. It would seem from these investigations, so far as they go, that the toxic action of thyroid is of a different nature from that of other conditions, and one which we are not, therefore, in a position to understand.

INJECTIONS OF ARTIFICIAL SERUM AS A MEANS OF PREVENTING DEATH IN BURNS.

Tommasoli (Rif. Med., July 5) recalls the fact that he sent to the Dermatological Congress, held in London in 1896, a note giving an account of trials made by him, during a period of three years with artificial serum as a means of treatment in certain skin affections, which he believes to be due to chronic infective intoxication or autointoxication. In some cases—two of diffuse chronic eczema, one of scattered folliculitis, one of senile pruritus—a cure had been effected; a case of lichen planus, in which itching was very marked, was cured in thirty-six days.

Since then the same treatment has been successful in cases of psoriasis and various pruriginous affections. Tommasoli now reports the results of the same method of treatment in two cases of very extensive burns. In one the patient was a woman aged 60, who was burned severely over two-thirds of the front of the body, face and limbs. Diarrhoea and delirium had set in, and death seemed to be imminent, when Tommasoli determined to try the effect of injections of ordinary artificial serum composed of chloride of sodium and bicarbonate of sodium. The patient, who was burned on December 2, came under his care on December 4. On December 10 a first injection of 300 g. of serum was given. The next day one litre was injected in two doses. On December 12 a litre was injected in one dose, the patient being kept meanwhile in a bath. On December 13 another litre was injected. On December 14 the patient died. The effect of the injections had, however, been distinctly good, the patient passing some hours of freedom from pain after each one. Encouraged by this result Tommasoli adopted the same method in the case of a man aged 20, who was severely burned all over the right side of the front of the chest, the axilla and the arm, as well as over the whole of the back from the shoulders to the buttocks and over all the right buttock. He was admitted on March 12, and on the 13th an injection of 250 g. of serum was given. One of 300 g. was given on the 14th, one of 400 g. on the 15th. On the 16th the wounds were dressed with iodoform, but this had to be discontinued in a few days on account of its toxic effects. On the 17th an injection of 400 g. was given, and on the 18th and every subsequent day till April 6 one of 500 g. From the first the patient, though prostrated by pain, held his own; then he improved rapidly, and on May 3, when he insisted on leaving the hospital, his general condition was excellent, and the wounds had a healthy appearance. Experiments on rabbits and dogs showed that injections of artificial serum have a very distinct effect in preserving life after severe burns.

PICRIC ACID IN ECZEMA.

Gaucher (Sem. Med., May 26, 1897) has had very good results in acute vesicular eczema using picric acid. He applies a one per cent. solution every other day, and covers the surface with cotton wool soaked in this solution. The dressing is kept in place for two days. The acute inflammation subsides rapidly, and itching is relieved. This treatment would probably be useful in other acute skin diseases such as pemphigus, but is useless in chronic eczema.

MARAGLIANO'S SERUM IN CERVICAL ADENTITIS ASSOCIATED WITH PHLYCTENULAR OPHTHALMIA.

Beccaria Francesce (Rif. Med., June 28, 1897) in a paper read before the Medical Society of Turin, reports good results obtained by him by this treatment. The patients had no pulmonary lesions and were apyretic, but the strumous and lymphatic constitution was well marked. The best results were obtained when the injections were given every five or six days. The body weight increased under treatment. No rise of temperature ever occurred. In a very few cases the intramuscular injections gave rise to erythema. The subconjunctival injections were not painful, were rapidly absorbed and gave rise to no irritation. The phlyctenule disappeared in four or five days, two injections being sufficient as a rule. Fresh phlyctenulae or pustules rarely reappeared.

CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING AUGUST 21, 1897.

August 14—Assistant Surgeon F. L. Pleadwell, detached from the Texas August 17 and ordered to the Nashville, August 19.

Assistant Surgeon W. M. Wheeler, detached from the Oregon August 23 and ordered to the Mare Island Navy Yard for duty in connection with the Marietta.

August 20—Assistant Surgeon D. H. Morgan, detached from the Monongahela and ordered to the Cincinnati.

Miscellany.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION'S PRELIMINARY PROGRAMME.

The following papers will be read at the next annual meeting of the American Electro-Therapeutic Association, at Harrisburg, Pa., September 21, 22 and 23, 1897:

1. Caleb Brown, M. D., Sac City, Iowa—"Electricity as an Aid in the Treatment of Goitre."

2. George E. Bill, M. D., Harrisburg, Pa.—Title to be announced later.

3. Francis B. Bishop, M. D., Washington, D. C.—"Chorea."

4. Lucy Hall Brown, M. D., Brooklyn, N. Y.—"A New Electrode for Use With Static Machine."

5. Eugene R. Corson, M. D., Savannah, Ga.—"Some Thoughts and Suggestions on X-Ray Work."

6 Margaret A. Cleaves, M. D., New York.—"Expenditure of Electrical Energy." (Paper announced at the last meeting, but not as yet read or printed.)

7. Professor A. E. Dolbear, Tuft's College, Boston, Mass.—"Molecular Effects of Electricity."

8. William J. Herdman, M. D., Ann Arbor, Mich.—"The Influence of Magnetic Fields on Nutrition."

9. J. H. Kellogg, M. D., Battle Creek, Mich.—Electricity as a Means of Involuntary Exercise."

10. Charles H. Loder, M. D., Chicago, Ill. "The Treatment of Urethral Hyperesthesia in the Male."

11. Robert S. Newton, M. D., New York—"What Has Electricity Accomplished in the Treatment of Mental Diseases?"

12. Robert Newman, M. D., New York.—"Electric Treatment in Gout and Uric Acid Diathesis."

13. R. J. Nunn, M. D., Savannah, Ga.—"Sources of Atmospheric Electricity."

14. Curran Pope, Louisville, Ky.—"The Electro-Therapeutics of Neurasthenia."

15. F. H. Wallace, M. D., Boston, Mass.—"Ozone in Nasal Catarrh and Pulmonary Diseases."

16. W. S. Watson, M. D., Fishkill-on-Hudson.—"Medical Electricity."

17 L. A. Weigel, M. D., Rochester, N. Y.—"Electricity in Orthopedic Practice."

18. G. B. Massey, M. D., Philadelphia, Pa.—"The New Electro-Mercuric Treatment of Cancer."

19. J. Bergonie, M. D., Bordeaux, France.—

a—"A New Electrode, Preventing the Diffusion of the Current."

b—"Palliative Electric Treatment of Tic Douloureux of the Face."

c—"The Action of the Roentgen Rays on the Vitality and Virulence of Koch's Bacilli in Cultures."

There is a good prospect of having a fine exhibit of electrical apparatuses and also several social entertainments and receptions.

Arrangements have been made with the Commonwealth Hotel, which will form the headquarters of the officers of the association; the Lochiel Hotel and the Bolton Hotel, Harrisburg, Pa.

CORRECTION.

In he prescription on page 138 of last issue in the article by Dr. Nefe a typographical error made "oz." out of "dr." It should read as follows:

R—Fl. ext. hydrast can.
Ol. terebinth.....aa. dr. ii
Spts. vini gallici.
Aquae .....aa. fl. oz. ii
M. Sig.—One teaspoonful every hour, alternating with No. 1.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
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VOL. XXXIV. No. 7. PHILADELPHIA AND BOSTON, OCTOBER 2, 1897. WHOLE No. 947.

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Original

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

THE MORBID ANATOMY OF MIXED TUMORS IN ITS RELATION TO MALIGNANCY.

In the genesis of new formations springing from or imbedding themselves in any of the organs or normal structures of the human body, it will be always observed that each of the two great oncologic divisions is distinguished by certain definite characteristic features, viz.: First, by one maintaining, in the course of augmentation, steadily up to the stage of degeneration or retrogression, in its composition, the same essential elements as the matrix structure, from which it originally appeared.

Primarily, in frequency of occurrence the homogenous growths exceed all others, and are quite invariably benign, until, by age, trauma

or some internal organic disturbance they take on new changes and, perchance for the first time, one who is subject of them, becomes sensible of their presence, by local symptoms, and, as a sequence we have a composite, succeeding a simple growth—a mixed tumor.

HETEROGENEOUS TUMORS.

Those growths which present histologic characters radically unlike the elements from which they spring or bear the stamp of aggressive invasion are designated "heterogeneous." In common parlance, they are foreign piratic destroyers, claiming domiciles in the domain of other structures, which they in time encroach on and deprive of their sustenence.

This group embraces many subdivisions, but in all their mixed character is their dominant, anatomical feature.

They seldom appear before puberty and more frequently about middle life, when the vital forces begin to wane, and evidence of diminished physical vigor may be observed. Of this numerous group in point of numbers the dermoid division dominates; which, though most commonly seated in the ovary, the parovarium, the broad ligament or mammary gland of the female, may be found contiguous to any of the epithelial structures of the body, or in either sex.

Enchondromata and adenomata of the benign variety, but a mixed type, are sometimes met with in certain regions of the body, especially those in close contact with osseous structures.

Perhaps, of all the neoplasmata there is none so often associated with a greater diversity of anatomic and morphologic elements than various types of sarcoma; thus in various parts of the same tumor, on microscopic section, we may, in one area find a large invasion of the typical embryonic myeloplaxis of sarcoma, in another the lymphoid elements of simple inflammation widely infiltrate; turning to another section we may find an extensive hypertrophy of the smooth muscle or connective tissue fibres.

We may discover the same heterogeneity wherever connective tissue proliferation may be situated, whether in an organ or tissue. Hence, we have in the modern nomenclature of oncology the terms fibro-sarcoma, adeno-sarcoma, lympho-sarcoma, etc., all of which point to the essentially mixed character of a large number of this class of growths in various stages of their evolution, and this may,too,partly explain the great confusion which to-day obtains, in the classification of various modern authors on surgical pathology.

Besides the two dominant groups of mixed tumors embraced in the preceding enumeration, we have another, which, however, though we must admit belongs to the heterogeneous order, is not, strictly speaking, an essential tumor, but rather a hyperplasia, tending to infiltration and a breaking down of tissue.

It is always of an inflammatory origin, and rarely seen except in connection with the uterus in child-bearing women, being especially prone to succeed lacerations of the cervix, abortions, miscarriages or endometritis from any cause.

Fungous endometritis is a comparatively common lesion, giving rise to a diversity of symptoms, some of which bear a very close analogy to malignant disease. The metrorrhagic discharges of an ichorous material, intermixed with coagula and shreds, may often lead one to strongly suspect epithelial invasion or extensive sarcomatous degeneration of the mucosum. By curettage and microscopical examination of the scrapings we will find every shade of adenomatous mutations; very often a state of "mixed" infiltration, new growth of large gland follicles, with myxmatous, fatty or pigmentary changes in the epithelia. In others, again, the histologic changes rather involve the interstitial elements; there has been a leucocytosis with a free invasion of very large lymph corpuscles, intermixed with the true medullary cells of sarcoma.

The large cicatrix left after a deep laceration in the os-uter, often induces an eversion and erosion of the mucosum. A rim of velvety granular tissue encircles the lumen of the

cervical canal, which becomes sensitive, painful in coitus, and liable to bleed on irritation.

The keloid elements have taken on pathologic changes, engrafted on the primary stenosed portal; there is a low grade of cell proliferation, consequent on inflammation or, more serious yet, epitheliomatous changes have begun.

The above are types of mixed proliferation; in one instance, one element dominating; in another type, a different element in operation.

MIXED ELEMENTS IN CANCEROUS CONDITIONS OF TISSUE.

It strikes me as more accurate and comprehensive to speak of "cancerous condition of the tissues" than of "cancerous tumors," for the reason that in many cancerous states, there is no tumor of any kind, or tumefaction, other than what is dependent on the coincident inflammation and intumescence of ulceration.

We might as properly speak of tubercular, syphilitic or chancroidal tumors, when we refer to "ulcers" depending on these specific conditions.

As we will see later, every true cancer is primarily a homologous growth, and hence can only derive its ultimate heterogeneity from degenerative changes. For example, in the most malignant type, the encephaloid, the connective-tissue disappears before the ravages of epithelial ingrowth, while, on the contrary, in atrophic cancer the adenomatous elements are caught and crushed out by contracting bands of fibrous tissue. In fact, cancerous tissues undergo nearly every conceivable variety of transition and metamorphosis.

But as all this, bearing essentially on malignant disease, has only an indirect connection with the subject of mixed growths of a benign character at the outset, it is only necessary to emphasize the fact, that one is peculiar to the evolution of development and the other to degenerative changes, mixed anatomic elements being present in the evolution of one, and disintegration of the other.

Society Reports.

OBSTETRICAL SOCIETY OF CINCINNATI.

OFFICIAL REPORT.

Meeting of March 11, 1897.

The President, Rufus B. Hall, M. D.,
in the Chair.

E. S. McKEE, M. D., Secretary.

DR. JAMES FRANKLIN HEADY REPORTED A CASE OF CEPHAL-HEMATOMA.

The fact that Henning had 230 out of 53,506 births, or 0.43 per cent.; Hofmohl 371 in 59,885, or 0.6 per cent.; and that this is my first case in about 1000 births is the apology offered for this report.

Fourth infant Davis, male, aged eight days, was delivered on February 1, 1897, after a hard labor of 20 hours. The membranes remained intact until a few minutes before delivery. He is well-developed, weighs seven pounds; deeply jaundiced. Situated over the occipital bone, extending from the superior angle to superior curved line is a swelling about the size of a small orange. It is not discolored, not painful, but elastic on pressure. At the junction of the swelling with the bone a well defined hard ridge could be recognized. The lump was not noticed until February 2, and has gradually increased until the present time.

March 8—Child five weeks old, general condition good. Jaundice has entirely disappeared. The swelling has decreased about one-third in size, still elastic and not painful on pressure. The hard line at its junction with the occipital bone has increased. No crackling could be produced over any part of the swelling by pressure.

The evident cause of this swelling has been pressure upon the occipital bone by the cervix uteri. It was not a forceps delivery, and could not arise from that cause. In some cases it is difficult to give a good cause, as this has occurred in breech deliveries.

The treatment has been nil. I must confess the temptation has been very great to empty the contents of the swelling. This course would be supported by Winckel, Olshausen and others. Henoch, Baginsky, Zweifel, Biedert, F. Koenig and others condemn any operative procedure as meddlesome so long as there are no signs of inflammatory reaction or of suppuration.

DISCUSSION.

Dr. William Gillespie—I was rather surprised to hear Dr. Heady speak of cephalhematoma as so rare. My experience has not extended over a thousand cases by a good deal, and I have seen four cases of tumor of this character. In the first case there was separation. The periosteum was pulled loose from the bone. I opened it and washed it out and had a very good recovery. The three cases I saw afterward I simply punctured and covered with collodion, and had very good results. The books, however, say that is not good treatment, and we should not puncture, but let absorption take place.

In the first place I had used forceps, and no doubt the bruising had something to do with the separation. I believe there is really a larger percentage of cephalhematoma than we are led to believe, and that it is often mistaken for a caput succedaneum. It is located in the same part of the head as saput succedaneum, and the mistake might easily be made.

Dr. M. A. Tate—Like Dr. Gillespie, I was surprised to hear that so few cases occur. I have seen two cases. One was a double cephalhematoma and the other one I saw not long ago in Newport. I let them alone and a good recovery resulted in both cases.

Dr. Thad. A. Reamy—I have seen a number of these cases and have treated them by both methods. I never open them at first, but have opened them subsequently. I have never seen a case that did not recover. The condition, of course, is almost invariably associated with a protracted labor, usually due to the causes that have been indicated by the author of the report. I think in most instances it is quite well to leave them alone. In many cases the contents are gradually absorbed, and as even very simple operations on young children are attended with more danger than in children who are older, I think it is well to wait usually and see if absorption will take place.

Dr. Julia W. Carpenter—I have had experience with but one case, and that recovered without any interference; it passed away in a comparatively short time. The size was that of about half a good-sized orange.

Dr. C. B. Schoolfield—I have had about five or six cases of cephalhematoma in my practice, and in all of them except one I used the let-alone treatment, and they all recovered promptly. The first case I had I punctured and squeezed the blood out, and it promptly returned, and I did not puncture a second time. I do not think puncture is indicated unless there is suppuration or something of that sort.

Dr. G. S. Mitchell—I recall but one case that has occurred in my practice, and in that case the expectant plan of treatment was carried out. Like one of the gentlemen who has spoken, I am fearful that many cases of so-called caput succedaneum belong to the category. It is a little surprising to me in the cases reported that this condition of affairs could have occurred, owing to the fact that pressure was not very great and the membranes were not ruptured until shortly before delivery, which would preclude any very great amount of violence to the head. The case that occurred in my own practice was one of tedious and difficult delivery, a forceps case in which the membranes had ruptured early and there was considerable disproportion between the pelvis and the head. The forceps were on for at least an hour. The swelling lasted for a number of weeks and finally disappeared.

Dr. W. H. Wenning—I came in rather late, but from the remarks I infer the paper was upon hematoma. From my own practice I would infer that this condition is somewhat rare, for I have never seen a case of caput-hematoma. As regards the treatment, of course I can only speak from what others say, and I would think the let-alone treatment would be the proper thing in the first place, and wait for absorption; if that does not occur I do not see why we should not open the tumor and hasten the disappearance.

Dr. C. D. Palmer—I have seen a number of these cases, but have never seen one that did not spontaneously recover.

Dr. E. S. McKee—I have had two cases of cephalhematoma. The first was a very rare and interesting variety, viz., intra-cranial. Breech presentation. Body expelled promptly, but head was slow enough to cause some apprehension before successfully delivered; xiii-para. Child well developed and hearty. Saw it every day, and it seemed to be doing well. On the fifth day was fretful, took convulsions and died on the sixth day. Post-mortem 20 hours after death. Found skin normal, but between scalp and pericranium found a large effusion of blood, coagulated, extending over a greater part of the left parietal bone and

not surrounded by any bony ridge. Opening the skull found the bones in a perfectly normal condition, the dura mater healthy, but in the cavity of the arachnoid and corresponding in position to outer tumor found a large and extensive clot of blood, causing a depression of the brain in its deepest part, which was one inch to the left of the posterior fontanelle. Effusion larger than externally, extending down to the foramen magnum. No ruptured vessels could be found. Other parts normal. Cause of death, intracranial cephalhematoma. This mother had three other children to die in convulsions. Might they not have had intra-cranial cephalhematomae, and might there not have been an inherited tendency? Had this case been diagnosed ante-mortem would trephining have been justifiable? This case was reported in the Lancet Clinic, vol. ii, 1883, p. 317.

The second case occurred about 15 months ago and was of the ordinary extra-cranial variety. I ordered pressure and the tumor was dispelled. The child is now living and well. This was a rapid delivery, the child being born before my arrival. Mother a i-para.

Dr. Gillespie—I would infer from what I have heard this evening that cephalhematoma is generally regarded as coming on after the time of birth. The cases I have seen surely existed before birth, because the rim of callous thrown around the tumor existed at the time of birth. I think it is Charpentier says true cephalhematoma is due to pre-existing conditions, and not to a difficult labor at the time of birth.

ETIOLOGY OF MALPOSITIONS OF THE UTERUS.

Dr. C. D. Palmer—Bear in mind that there is very little new to say on this subject.

What is a uterine displacement? A position of the organ out of its natural place. Now, that definition, if it is correct, implies that the uterus has a natural place, and that when it is out of that natural place we have a displacement of the uterus. Everybody knows that the uterus is a very movable organ, and it is a wise provision of nature that it is such. If the appendages were diseased, as often we see them nowadays, and the uterus were not a movable organ, it would be much worse than it is. How could pregnancy go on if the uterus were not a movable organ?

The uterus changes position with the respiratory act, with alterations in the position of the body, with the functioning of the bladder and the rectum, by sexual intercourse and by pregnancy. The position of the uterus is very different when the woman stands erect, when she sits, or when she lies down, and the position of the uterus is different when the rectum or bladder is full than when empty. All of these changes are within the bounds of health, so none of them could be called uterine displacements. Now, we cannot accurately estimate the normal posture of the uterus when we take the dead subject, in whom there has been a supposed normal position of the uterus during life. If that body is frozen of course there must be a change in the elasticity of the tissues. If you freeze any female body and keep the subject on the back, you will have some change in position of the uterus take place. And no doubt the posture of the uterus is somewhat changed by the acts of parturition. The posture in the multiparous woman is somewhat different from that of a nulliparous woman. Now, everybody realizes how much the uterus is changed in its position by the various postures assumed during any local physical examination. How different is the position of the uterus in the woman when you put her in the horizontal posture, in the Sim's posture, in the Simon's or in the Trendelenberg posture. In my experience there is no posture of the body which enables us so carefully to explore the conditions of the pelvic roof and the internal genitalia as Simon's posture. So convinced am I that I always use the exaggerated lithotomy posture whenever I desire to make a careful pelvic examination. And I can make a better examination at the third month of gestation in this posture to detect Hegar's signs than in any other. I

am so confident of, and depend so much upon, Hegar's signs in this the third month that if I do not find these signs I am reasonably convinced that the woman is not pregnant, almost as much so as when I hear the fetal heart sound later on.

The determination of the normal posture of the uterus, and what is an abnormal posture, implies a consideration of what holds the uterus in its normal and what puts it out of its normal posture. Of course, all the ligaments have much to do with holding the uterus in position, and, above all, the utero-sacral ligaments are important. I do not believe there is any other ligament comparable in strength in holding the uterus in position. They are composed of unstripped muscular fibres,and are but the continuation of the parenchyma of the uterus back to the sacrum. They pull, of course, the lower part of the uterus upwardly and backwardly, and, so acting, they naturally throw the upper part of the uterus downwardly and forwardly. That implies that the uterus is a lever of the first class. The power may be below or above, and the weight is at the opposite end, but the fulcrum always has a fixed point. This fulcrum is not at the junction of the body and the cervix of the uterus, but I think it is just above the vaginal vault. This part of the uterus is bound to the bladder as much as the bladder can hold it, and is bound to the rectum in the same way. Here, too, the uterus is bound to the sacrum, and held by the vagina, the pelvic fascia and the pelvic connective tissue and pelvic fat. The vagina has very much to do with holding the uterus in position, much more than some would think. Being attached to the bladder in front, the rectum behind and to the sides of the pelvis, it must hold the uterus. You cannot have much displacement of the uterus without more or less distortion in place of the vagina, and, vica versa, there cannot be much distortion of the vagina without some displacement of the uterus. The way in which the pelvis is related to the perpendicular line of the body varies with different women. If a woman is erect the brim of the pelvis will describe the perpendicular line of the body at an angle of 140 degrees to 170 degrees. The greater this angle is the more does the weight of the abdominal viscera, particularly the intestines, come on the top of the uterus, and the back wall of the uterus. The more those weights are so directed the greater the predisposition to the anteversion of the uterus. Of course, the most potent influences in holding the uterus in the normal anteversion are the utero-sacral with the round ligaments. And I believe there is much in the so-called suction power of the abdomen. This suction is noted especially in women who have not undergone parturition, who have a round abdomen and an erect posture.

Now, what are the forces that tend to put the uterus out of posture? We ought to classify the causes under four general headings:

First, anything which tends to increase the bulk and weight of the uterus leads to some displacement of the uterus. Congestion, passive hyperemia and chronic exudations into the uterine wall; in fact, anything, it matters not what, which augments the bulk and weight of the uterus, favors a downward displacement of the uterus at first, and, in time, some retroversion.

Secondly, relaxation and weakening of any of the supports, from lacerations, undue stretchings and diseases. It is almost impossible to have increased bulk and weight without some relaxation of support.

Thirdly, as everybody knows, any increased abdominal pressure from above may favor the displacement.

Finally, an increased traction from below may bring about a displacement.

It is impossible, it seems to me, for anybody to consider any cause which could not be classified under these four headings. This classification simplifies the whole matter very much.

TREATMENT OF MALPOSITIONS OF THE UTERUS BY PESSARIES.

Dr. Thad. A. Reamy—What I have to say further to-night is exclusively upon retro-displacement of the uter-

us. I do not believe that it was the intention when I was assigned to this subject that I should spend very much of your time nor that I should make a speech or paper that should be extensive. But I wish to call the attention of the society to the uses of the pessary in retro-displacements of the uterus. I beg you to remember the normal uterus. The causes of displacements are well known to you all. You cannot have descent of the uterus without displacement. But now we have to deal with retroversion with the pessary. The pessary is ordinarily only an auxiliary to other treatment. The first thing the pessary does is to lengthen the vagina, and if it does not do that it is no account. So far as it may increase the angle of the vagina with the angle of the uterus and not cause discomfort of the woman it aids in the treatment of retroversion. I refer here to the primary conditions; I shall later speak of a pessary which does not do that, but is of value in giving comfort in worse cases. But now we are speaking of a patient who is younger. The obligations of society, the foolishness of custom, have led so many young women to neglect to empty the bladder, or it is impossible for them to do it, and the bladder is kept inordinately full for many hours at a time, and this has a tendency to push the uterus over. Tight lacing and the destruction of the intra-abdominal pressure is another cause. But now we are speaking of a uterus that is retroverted. The vagina is not particularly distended. The utero-sacral ligaments have been stretched in every one of these cases to a slight degree. Now we are speaking of an acute case; therefore, utero-displacement has taken place to a slight degree and there is a tendency for the little virgin uterus to settle down in the little virgin vagina. The introduction in such a case of the narrow Smith pessary or Smith funnel pessary, which can be done without rupturing the hymen, if the hymen is intact, which is not in about half the cases in this country—excuse me for going outside the subject, but so many young girls use the syringe to wash out the vagina after each menstruation that the hymen is not very often found intact. The hymen is now a thin organ compared with the hymen of the ancient Jew, in which it was a sign of virginity, on which even her life depended. But this pessary can be introduced, if carefully done, without rupturing the hymen. Put the woman in the genu-pectoral position; particularly at first place the patient on the side, because in this position you can repose and examine the condition better than upon the back. Then, having found the condition, repose the uterus before introducing the pessary. Then lubricate this pessary, carry it in and get it behind the uterus. Now the little cylindrical virgin cervix fits into the pessary, the bulb of the pessary makes pressure upon the utero-sacral ligaments. This pressure pushes these ligaments up and makes them act as though they were shortened, and frequently sets up a little irritation; a little inflammatory exudation takes place and the liagments become shorter. This pessary is self-supporting. It goes up behind the uterus and comes down between the pubic rami and the downward pressure of the uterus simply acts as a leverage power to keep the pessary in place. It lengthens the vagina a little and holds the uterus in place. In this class of cases I have seen many, many cases in which the displacement was completely cured by means of this pessary.

In some cases you will find this pessary will not answer, but the little Hodge pessary will do better. This has the objection that temporarily it spreads the vagina a little, but you must use it very small. The pessary that goes in so tightly that it seems it cannot come down is not the pessary to be used in these cases.

Now we will take up another class of cases. Here is the Albert Smith pessary, which you know is a modification of the Hodge pessary. The modification consists in narrowing one end and dipping it down, and it was intended to act as a swing to lodge between the sacrum and the symphysis. Now we are dealing with a uterus that is larger and in

which the retroversion is more pronounced than in the class of cases to which we have just referred. The uterus has not been enlarged to such a degree that its weight and the retroversion make it impossible for us to repose the organ. But the woman has the discomfort of pressure on the rectum, etc. You carry this pessary up behind the uterus. The pressure then turns the pessary up so it is self-retaining. This it does without fitting very closely. The treatment does not depend on the use of the pessary alone. The woman must go to the physician once or twice a week, the pessary must be taken out, the uterus reposed and the pessary replaced. You may do everything you could if the pessary were not in to improve the condition of the ligaments and change the woman's habits. You simply use this pessary as a crutch on a broken limb until it gets stronger. But do not let the pessary be too large, so as to stretch the vagina.

Let us now take another case. If the uterus is not fixed by adhesion, if it is simply a case of retroversion with the uterus not enormously enlarged, but a retroversion that will cause disability of the woman and become unmanageable later on, and the woman has no laceration of the cervix, what would be the best treatment? If the uterus it not too large and the case has not gone too far I know of no operation in all surgery so absolutely beautiful in its results and so easy to do as shortening of the round ligaments, but if you shorten the round ligaments and do not put a pessary in to hold up the weight of the uterus for several months, until the ligaments have become strong and the uterus has become accustomed to its position, you will find that the displacement will not be cured. It has been said that the round ligaments are intended as guy ropes. They simply keep the uterus from going too far, and do not act as direct supports originally. But after the Alexander operation this is improved. After the operation of trachelorrhaphy I am in the habit of using a pessary for two or three months. Repair the perineum and the cervix if needed, curette and pack if needed, and shorten the round ligaments if needed, and introduce the pessary at the same sitting and you wil probably cure the patient, which you will probably not do if you do not use the pessary. In the virgin and in the cases I have mentioned of married women I have frequently seen a cure effected with the pessary. In cases in which the uterus is very large it is very seldom that we get any benefit from a pessary as large as the one I now show you. When you cannot get the patient to submit to an operation you can sometimes get a good deal of comfort by introducing a simple ring pessary of large size. I have in several of these cases gotten a great deal of comfort, where I could have the patient under observation, by introducing four or five pessaries of this kind, of different sizes, scattered around the vagina in different directions, in a case of complete procidentia. I have a woman now in Greensburg, Ind., who has been under my care for some time, who has not submitted to an operation, and with a hard rubber pessary of this character she has secured considerable comfort.

I could speak of the comfort that might be secured by an anteversion pessary, but the time now is short and I will not now detain you, but take that up at some other time if you will permit me. The pessary not only will prevent the symptoms, but will help the woman to recover complete health in many cases; secondly, in a considerable number of these cases a permanent cure is secured; thirdly, where there are no adhesions and you have made a trachelorrhaphy if necessary, you succeed in the permanent cure of retroversion and the consequent descent of the uterus, with other treatment, by using a pessary that is placed behind the uterus and lengthens the vagina. The primary use of the pessary, therefore, is to restore the normal angle between the uterus and the vagina. The pessary should make pressure, but not sufficient pressure to cause damage of the sacro-uterine ligaments. If you carry this pressure to far you may get a neoplasm there that is very

disagreeable. A pessary made of block tin and bent to suit each case is admirable and answers the purpose very well. Take a pessary in which the curve is not sufficient for your case, or not long enough, you can place the pessary in hot water and with a pair of forceps shorten it up without shortening the curve.

The other thing I wanted to say is to never introduce a pessary at any time for anybody unless you have a guarantee that you can keep your eye on the case, and if they break that guarantee you are not responsible. Never let it be said you left a pessary 10 or 15 years until it was cut out by somebody. If the pessary causes inflammation take it out. If you have to tampon the woman before using the pessary do so, and if you cannot use the pessary don't use it. The right use of the pessary requires more skill tenfold than to make a laparotomy, except some anatomical knowledge and coolness in using the knife.

Dr. G. S. Mitchell—I was very much interested in the remarks of the second speaker, and I am certainly heartily in accord with is views in regard to the pessary. I know of no instrument that gives more satisfaction; I know of no procedure which affords greater relief in a large number of cases than the introduction of a properly adjusted pessary. Like the gentleman, I don't regard the pessary as a curative instrument in many cases, although I have frequently seen a radical cure follow the use of the pessary with other local treatment without any operative interference. I know there are gentlemen, whom we class among gynecological surgeons, who have no use for the pessary. These same gentlemen, with the same propriety and for the same reason, might say there is no use wearing a truss, and yet we do know a properly adjusted truss sometimes results in a cure of hernia, simply because it sets up an irritation that induces an inflammatory process that cures it. And the pessary, by causing a little inflammation, often cures these cases. Thus the pessary sometimes causes what the cellulitis sometimes does, and we have a pathological infection of the uterus. That is what we have by the method which has been carried out in the operative procedure described by Dr. Hall; that is what we have by the so-called Kelley method and the so-called Alexander method of shortening the round ligaments. Of course, if we have a prolapsed ovary or an inflammation about the uterus, a so-called parametritis, endometritis or perimetritis, we would not think of introducing the pessary. No one would introduce the pessary where there is already an inflammatory process. There is nothing will cause a heavy, baggy uterus, already in a state of congestion, to diminish its size better than holding it in proper position by a well-adjusted pessary. In the majority of these cases, in which the pessary is to be introduced in retroversion in multiparae, where there is more or less vaginal lesion and more or less injury to the pelvic floor, of course it is proper to make a vaginal colporrhaphy, an operation for cystocele, or trachelorrhaphy, and after all this is done as an adjunct it becomes necessary oftentimes for a number of months, sometimes for a year, to introduce a pessary and hold the organ in proper position.

I have not had any personal experience with vaginal fixation, but I am satisfied that the men who first advised the so-called Duhrssen, of Berlin, operation have discontinued it. It strikes me the operation is not at all proper. Notwithstanding the gentleman has recommended it so highly to-night, I do not believe it is a proper operation; I know any operation could be performed by him with ease, he is such a dextrous operator, but the ordinary operator would find this operation one of more or less difficulty. I can hardly conceive of the operation not being attended with danger. After we have made the colporrhaphy and operated on the anterior wall, or whatever is necessary, it seems to me the best radical operation is to shorten the round ligaments. Alexander says one should not attempt this operation until he has made five or six such operations on the cadaver. It is a very difficult matter to pick up

the round ligaments. The danger from hemorrhage is very trivial, and as to the formation of scars that argument amounts to nothing at all.

Dr. Edwin Ricketts—When the question is asked, what is the normal position of the uterus? it can be answered a good deal in this way: What is meat for one person is poison for another. The question of malposition is one in which I think there has been a good deal of unnecessary scientific speculation. In regard to the question touched upon by Dr. Reamy, that is the version backward, in which he spoke of the distended bladder with the constipation habit and the disposition or indulgence in matters pertaining to society, he did not cure that patient until he had restricted or cut short, so to speak, the distended bladder business and had taken her out of society, and I believe the same end could have been secured by taking the patient out of society and regulating her habit, without the use of the pessary. These patients many times, in connection with relief of vicious habits, are often greatly relieved by being placed upon their face, especially at the menstrual time, for a specified time. I cannot understand yet why so much is claimed for the pessary. I think that, theoretically speaking, it is very nice, but it is a good deal like a man lifting himself over a fence with his boot-straps, and for a man to make the statement that the pessary is of itself riding easy, so to speak, without making undue pressure on one or two sides of the vagina, is a mechanical measure I cannot understand. It has to have bearing somewhere for the uterus to ride, so to speak. The question of surgical interference for posterior versions, as suggested by Dr. Hall this evening, while I know it has been claimed by some gentlemen that the originator of this operation has discarded it, yet I do not think he has discarded it entirely. It don't make any difference about that; any gentleman who could have seen the operation in the hands of Dr. Hall as I have, and could have seen the result of those cases and the freedom from pain those patients have now in comparison with the pain they had previous to the operation for years, I am sure would be ready to give due credit to the operation. I do not care who goes back on the operation, I think we have a right for observation in Cincinnati as well as anywhere else. Whether this operation is to be the operation or not, it certainly is going to do away with the pessary. As to the position of the uterus as described by my friend, Dr. Reamy, which must be tilted forward in order that we may not have procidentia, of course that is correct. I do not think the anteversions amount to much as a rule; the retroversions are the ones we usally have to deal with. When these cases cannot be cured by relieving the distended bladder and placing the patient on her face, when anything is demanded I think the operation devised by the German gentleman is the one that will be considered more in the future than in the past. And you will be surprised how readily you can turn the uterus out, and the danger of hernia is practically nil.

Dr. Carpenter—I was glad to hear the favorable words from one of such experience as Dr. Reamy upon the successful use of properly adjusted pessaries. We always like to hear something commended that we have succeeded with ourselves, and it has always seemed to me that those who condemn the use of pessaries wholesale are ordinarily influenced by seeing those used which are too large and where damage was done. Too many persons, especially those just graduating, have the idea that a pessary must stretch the parts in order to give support, and that is one thing that produces many bad results. A properly adjusted pessary is very movable, and will not stretch the parts. If one will try it in that way in suitable cases good results will be secured. Whenever I read anything on the subject of the normal position of the uterus I wonder where in this age they find the individuals in whom they can find that out—that is, in the adult. If you take a little child of course you can get many of those who are in a state of nature; but when

you come to the absolutely normal position in the adult of this age I do not know where you can find it, unless those investigations are made among Indian women who are in a state of nature. You can find out what the usual position is, but whether that is natural or not is another thing, because in every nation the clothing of women is of such a nature as to make pressure from above downward, and whether the organs are now in their absolutely natural position or not is a thing to be very much questioned.

Dr. Wenning—It has been said, with a good deal of truth, that a pessary in a good many instances is a necessary evil, and certainly it is an evil in the hands of a great many individuals. I make these prefatory remarks because we all encounter cases in which the pessary has done much harm, but I think it is because so many have not the proper idea as to what the pessary is intended to accomplish. We should not simply introduce the pessary and send the patient on without further care. I have very little to add to what has been said on this subject. I am heartily in accord with what the second speaker said about the pessary with one exception, and that is the use of the ring pessary, which does what a pessary above all things should not do, and that is it stretches the vagina. I have seen more ring pessaries in patients in whom the pessary was introduced by a practitioner not accustomed to introducing a pessary than any other kind of pessary. I need hardly mention the fact here that a pessary must exactly fit. If a pessary is too small it will do no good, and if it is too large it will stretch the parts. I think it requires greater nicety to properly introduce a pessary than to make even many of the gynecological procedures, and it is only one who is accustomed to examining the uterus who can say what kind of a pessary should be used.

One thing was not mentioned in the anatomy, and that is this: In my experience no pessary of any kind will do any good unless there is a normal rigidity of the uterus. When there is a pathological softening the pessary does often more harm than good. I think the uterus itself is the lever which is brought into requisition. If the cervico-vaginal junction is softened, if there is a pathological flexion, you invariably increase the trouble. So I think there must be a normal rigidity of the uterus before you can cure a version.

Now another thing as regards the determination of whether a pessary is properly placed or not. Of course you all understand that for retroversion the proper position for the introduction of the pessary is the Sims position, so that you are sure you have the pessary in the proper position. Of course it is understood that the pessary cannot correct the position of the uterus; the position of the uterus must first be corrected and then the pessary introduced. I first put the patient on her back and have her bear down, and then if I find the pessary is properly placed I examine the patient in the standing position and have her bear down and am thus enabled to determine whether there is a proper mobility of the pessary. If the pessary is too small it will slip down into the vagina, and if the pessary remains fixed too tightly above it is too large.

Then there is another thing to be taken into consideration, and that is the abdominal pressure. I never have a woman wear a pessary for retroversion who has borne many children without having her wear at the same time a well-fitting abdominal supporter. I believe the relaxation of the abdominal muscles forces the uterus down on the pessary, and this continued pressure in the erect posture is likely to cause the trouble to return again. The proper adjustment of an abdominal supporter, which will aid the abdominal walls in holding up the weight of the intestines, is very important.

Dr. Schoolfield—I feel very much obliged to the last speaker, especially for his remarks about the use of the pessary. I have had very little success with the pessary, and am not a strong advocate of it. His remarks, though, in regard to it I think are very applicable, and I think, too, that unless a pessary does

fit as accurately as a shoe should fit it does no good. I think too many times the pessary is too long. An ill-fitting pessary, and a great many of them are ill-fitting, being left in the vagina produces a great deal of injury and no good. I remember some time ago removing a wooden pessary, a round ring, left in the vagina something over a year, and it had so embedded itself I had to use an instrument and break the pessary in order to get it out. Of course that results from the lack of observation of the patient after the pessary was put in.

The question of the operations for the relief of retroversions is an interesting one, and those that restore the organ by replacing the conditions as nearly as possible to the natural are the ones which will do the most good. It seems to me the shortening of the round ligaments according to the Alexander method is the nearest to the physiological way of replacing the uterus in its proper position. The Mackenroth-Vineberg operations of replacing the uterus through the vagina will replace the uterus, but the drawing the uterus forward under the bladder, it seems to me, would cause a great deal of bladder trouble, and it would also cause the cicatrization of the anterior portion of the uterus, and would interfere with gestation in the same way that the ventral fixation does. I believe that ventral fixation is a delusion and a snare. I have done it and I have seen the rsults of it, and we see the reports of it in the journals, and I believe those who do the most of it are the ones best satisfied with it. A good many operators who a few years ago did ventral fixation are now abandoning it. Alexander himself and Edibohls, who has operated perhaps the most frequently of any operator in this country by the Alexander method, seem best satisfied with their results. I have never seen the operation spoken of by Dr. Hall, but it seems to me that next to the Alexander operation it is the most plausible and reasonable method that we have, because it is a shortening of the round ligaments. But it seems to me that fastening the round ligaments to the vagina is drawing the uterus too much forward and interfering too much with the functions of the bladder. It seems from a physiological standpoint that the Alexander operation would certainly be much more desirable, although it is probably as difficult, if not more so, than the Alexander operation.

Dr. C. L. Bonifield—In regard to the use of the pessary, I think a mistake that is very frequently made which interferes with getting good results from the use of the pessary, particularly in retroflexions, is that the curve of the pessary is too sharp; in fact, they are usually too sharp when we buy them. They do not give pressure in the proper place, and while we may push the uterus up in the pelvis we do not straighten it out. I have gotten very good results by straightening the pessary somewhat. The Hodge pessary I have found very much inclined to turn around and get crosswise in the vagina.

In regard to vaginal fixation, I was in Berlin at the time Duhrssen and Mackenroth were interested in this operation. I purchased a sound Duhrssen devised to bring the uterus forward, and brought it home with me, but have not used it. I was at first thoroughly determined to do the operation, but upon considering it further I have not done it. My lack of familiarity with the German language rendered it impossible for me to get all out of what was said by Duhrssen and Mackenroth. Mackenroth made his incision longitudinally with the vagina, while Duhrssen made his transversely. I saw Mackenroth do the operation and also saw Martin do it after the method of Mackenroth. I saw Duhrssen also do the operation. Duhrssen was in the habit of doing it in his outdoor clinic. After the operation the patient would wait in an outside room for two or three hours, and then he would pay her expenses home in a second-class cab. I examined several of these cases after two or three months, and the uterus certainly was anteflexed, but it possessed that disagreeable feature that the uterus always has after

being fixed by operation—that is, it is fixed and not freely movable as it naturally should be.

Dr. Hall (in closing)—I believe where we differ largely on the pessary is the selection of the proper cases in which the pessary will do any good. If we do that we can relieve many of our patients, and the pessary then is just what the truss is, a makeshift for comfort, for temporary relief, and those of our professional brethren who do not use the pessary at all do not use all the appliances at our hand for the best interest of his patient.

Now a word in defense of my position in the paper. As to the gentleman who abandoned the operation, I will say he abandoned it on the same ground that Leopold and that school abandoned their operation, because there is too firm a fixation of the body of the uterus to the abdominal wall. Interference with the rise of the uterus in pregnancy followed the early operations. The new operation, and the one I was trying to describe to-night, is not such an extensive fixation. When you are through the operation it is brought forward and tacked, so if the woman becomes pregnant the uterus can enlarge just as if the woman had not been through the operation. One man reports seven cases in which the women went through pregnancies all right. I believe if any of my patients become pregnant they will go through as well as anybody, as far as the operation is concerned. I have made the Alexander operation many times, and theoretically for bringing the uterus forward it is all right. Practically it is all right. It is the best operation for bringing the uterus forward for that purpose alone, but the operative danger between the two operations is markedly greater in the Alexander operation. No one who has seen the results of the Alexander operation will doubt that there are a good many cases in which hernia follows this procedure, and a woman with two hernias is about as bad off as a woman with retroversion. I believe if my wife had a retroverted uterus, before I would let her have an Alexander operation, with the danger of hernia, I would prefer to let her have the retroversion, and that is what I advise my patients. Of course, in a lean subject there is less danger of hernia than in a fat subject. Yet if the operation I have described this evening will do the same thing, as far as the result is concerned, it is to be preferred to the Alexander operation, even though it is more difficult than the Alexander operation. The man who is used to doing this kind of work will do it all right. And you do so little injury to the woman by that operation. Not one of the patients I have operated upon in this way has complained of pain and discomfort nearly as much as for a repair of the cervix or of the perineum.

Dr. Reamy—The very intelligent remarks of Dr. Wenning makes it necessary for me to call attention to one point. The doctor is correct in his statement that the pessary does not act as a lever on the uterus, but the uterus calls into requisition the lever action of the pessary. The remark of Dr. Bonifield I have verified hundreds of times. This pessary is about the correct shape; it is almost straight. The other remark I wanted to make is in reference to the shortening of the round ligaments by the Alexander operation or some modification of that procedure. I am sure any man who thinks this operation is difficult is someone who got his conception from hunting for the round ligaments after they are flattened out. If he will go down between the sacrum and the symphysis and make a dissection, striking an inch or three-quarters from the spine of the pubes, he will readily find the round ligament. I do the operation sometimes one way and sometimes another. Young Martin, you know, fastens it to the urachus if he can find it.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

DANGERS OF ARTIFICIAL RESPIRATION.

A recent issue of the London Lancet gives an interesting account of the attending dangers of artificial respiration in anesthesia.

The most obvious thing to do when a patient fails to take air into his lungs while he is under the influence of an anesthetic is to adopt one or another form of artificial respiration. In most cases the treatment is a correct one, and leads to a successful recovery of the patient. It must not, however, be assumed that in every case in which the breathing stops artificial respiration is the first act to be performed or is it a proceeding free from danger. In more than one instance resort to this method has led to fracture of the ribs, owing to some excited assistant pressing too vigorously upon degenerate bones. There must in every case be a cogent reason for trying to force air into the chest and a clear knowledge that at the same time no impediment exists in the upper air passages to its free entrance and exit. There have been numerous cases in which foreign bodies—balls of worsted, artificial teeth and masses of undigested food—have become engaged in the air passages, and have only been discovered after futile efforts at artificial respiration had been abandoned, as they had failed in their object. Not infrequently when abdominal section has to be performed to relieve intestinal obstruction there is a fatal tendency for the stercoraceous vomit so liable to occur during the operation to get sucked back into the larynx. This is the great peril of the anesthesia in such cases, and every instance of death under it is a warning. A man aged 58 years, exhausted by disease,

was operated upon to relieve obstruction, caused, as was found at the necropsy, by annular carcinomatous growth constricting the intestine at the ileo-cecal valve. The general condition of the patient was very bad, and the operation had to be delayed by the patient's refusal to give his consent, so that at the time he was given the anesthetic his state was a grave one. He took the ether well. What degree of anesthesia was obtained we are not told. In ten minutes the abdomen being opened and the surgeon being engaged in handling the intestines to discover where the constriction was, the patient commenced to vomit. He became livid and a gurgling was heard in his trachea. Artificial respiration was resorted to for a short time without improving the man's condition, and then tracheotomy was rapidly performed. A quantity of stercoraceous vomit issued from the tracheal tube, and although the artificial respiration was kept up the man died. There can be no doubt that in cases where it is certain that vomit has entered the lungs the first thing to do is, as was done in the present case, to perform tracheotomy and draw out with some pump all the fluid which can be got from the air passages. Artificial respiration when done by pressing upon the ribs and moving the arms can only force the stercoraceous vomit into the finer bronchi and effectually cut off any chance of the patient's recovery. It has been suggested that preliminary washing out of the stomach lessens the risk of vomiting, but it is not at present certain how far this can be relied on as a safeguard, since, as the stomach is emptied, a renewed regurgitation from the intestines is liable to occur. It seems probable that the inevitable manipulation of the intestines induces the reversed peristalsis which culminates in vomiting. Were this danger considered imminent it might justify a preliminary opening of the trachea and plugging above the tracheotomy tube, so as to effectually shut it off from the pharyngeal space. Whether such a procedure would increase too much the peril of the case experience alone can decide.

MATERNITY CHARITIES AND UNMARRIED WOMEN.

An attempt to define the normal relation between childbirth and the work of charitable relief might at first sight appear to be superfluous. Yet the fact remains that such a definition is still unknown, or if it does exist is too imperfectly understood to command general approval. Where the antecedents to matrimony have been quite regular there is of course no difficulty save that of the expense incurred. The case of illegitimate childbirth on the other hand is quite different. Questions of moral responsibility have entered in here, and the consequence is that public institutions which freely accept as inmates poor and deserving married women have no offer of help for a maiden mother. While we are willing to spare by every due consideration the feelings of the former class with regard to social surroundings, we cannot but think that the distinction in treatment so favorable to them is unduly neglectful of their erring sisters. It cannot be defended on the ground of charity unless we accept the much wider proposition that every mischance of illness which is the direct outcome of a vicious practice is outside the province of the charitable healer. The close connection between illegitimacy, concealment of birth and infanticide needs no explanation. Such preventive measures as have hitherto been employed to destroy this

mischievous and criminal combination have not been highly successful. The question remains whether they should not be supplemented by such public and charitable aid as is plainly needful to secure the safety of mother and child at the time of birth. We would answer this question in the affirmative.

THE ACTION OF X-RAYS ON MICRO-ORGANISMS.

Bonomo and Gros. (Giornal. Med. del Regio Esercito, an. 45, n. 6) have made researches in the military hospital at Rome on this subject. They subjected cultures of various micro-organisms (B. subtilis, B. tuberculosis, B. anthracis and others) up to the third generation to the influence of the x-rays, applied vertically, for a period of about three hours each day. Some retardation or diminution of vitality, vegetable and pathogenic, was observed in every case, but the change was for the most part very slight, except in the case of B. anthracis. With this microbe a well-marked diminution in motor activity, modification of chromogenic power and loss of spore-producing property was observed. With this, too, a complete attenuation of pathogenic effects was observed, so that the authors feel it might be possible through successive cultures exposed to the X-rays to make the B. anthracis innocuous. No such marked results were obtained with the other micro-organisms under the influence of the same rays. In every case such effects as were observed were more noticeable in the later than the earlier cultures.

SYPHILITIC ULCERATIONS.

The ulcerations resulting from the breaking down of pustular, tubercular and gummatous syphilides are frequently of a rapid, destructive character and exceedingly rebellious to treatment. Aside from the internal use of mercury and potassium iodide it is usually necessary to resort to local applications, and of the numerous topical remedies recommended the most prominent place is now assigned by many dermatologists to europhen. From a study of this drug Dr. J. A. Cantrell, professor of diseases of the skin in the Philadelphia Polyclinic (American Therapist) writes as follows regarding its utility in ulcerations of syphilitic nature:

"Eichhoff reached conclusions in favor of its action in syphilitic ulcerations after dusting these cases with the dry powder, while Migneco records excellent results also in ulcerating gummata, and Shoemaker by employing it both in 10 per cent. ointments and as a dusting powder in like ulcerations. Gottheil reached similar conclusions in regard to the use of this agent in ulcerations due to syphilitic infection, while Oeffelein and Neuberger in a joint paper publish effective cures and later Ullmann records similar experiences.

"Gilbert refers to beneficial effects in varicose ulcers of the leg which were dusted with the powder at night, and dressed with a 2 per cent. ointment during the daytime, and in which cases granulations soon

formed with cicatrization in three weeks. According to experiences gained during the time in which this agent was given trial in my clinical and private work I am inclined to believe that europhen is of some value, as in the dressings applied to the syphilitic variety of ulceration, the treatment assisting greatly in restoring the parts to their normal condition. By using dusting powders in varying strengths and with the assistance of the iodide of potassium internally results were reached usually in about two or three weeks; at first, by simply applying the powder until granulations were noted, and then making a change to an ointment it was found to act more beneficially in this manner. In all the experiments it was noted that the result was gained in a much shorter time than with the most of the iodine derivatives. In the non-syphilitic abrasions or ulcerations the drug acted similarly and with the change from the powder to the ointment the effect of the drug was enhanced. But care must be exercised that at the time in which granulations seem to be showing a change is made to an ointment, because if not done at the proper time one will be confronted with an over-abundant formation of healthy tissue, which is greatly to be deplored on account of the manner of treatment necessary for its removal, which may be detrimental to the result already achieved in the former dressings."

THE VIRGINIA HOT SPRINGS—AN IDEAL HEALTH RESORT.

Among the mineral springs resorts of the United States which will not only serve as a model for other resorts in this country, but is equal in every respect to such celebrated European resorts as Carlsbad and Aix la Chapelle, is the Virginia Hot Springs, located in the Hot Springs Valley, at an elevation of 2500 feet, on the Chesapeake & Ohio Railway. All the natural conditions unite here to form an ideal retreat for invalids. The surrounding mountains afford protection from violent atmospheric changes and insure a delightful temperature, free from extremes in summer and safe in winter. The scenery is bold and picturesque, and outdoor exercise is a feature of the place. The magnificent bathing establishment is provided with every modern appointment, and every bath is given with natural hot water.

In addition to the Hot Springs there are magnesia, sulphur, soda-lithia and alum springs on the grounds, and the very valuable and celebrated waters of the Healing Springs, which are located but a short distance from Hot Springs, are in constant use at this resort.

A strictly modern hotel, "The Homestead," was completed in the spring of '96, and few hotels are better fitted to supply every want and gratify every taste.

Being located about midway between New York and Cincinnati, the Springs are very convenient of access—the through service of the Chesapeake & Ohio being unsurpassed by any line of railway in the United States.

Full information may be obtained by addressing Mr. H. W. Fuller, G. P. A., C. & O. Ry., Washington, D. C., or Mr. Fred Sterry, manager, Hot Springs, Bath County, Va.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

IMPROVEMENTS IN ELECTRODES.

Recently H. A. Dow, Battle Creek, Mich., calls attention to a set of "soluble electrodes" designed for the treatment of parts lined with mucous membrane. They are made of hard rubber. Inside is a copper wire, which is the conductor and in positive galvanic applications combines the hydro-electric douche method with metallic electrolysis. Any other metal can be used if desired. The set comprises six electrodes, with a two-quart syringe bag, to contain the normal salt solution for douche treatment. Nos. 1 and 2 are for rectal use, No. 4 for vaginal and Nos. 5 and 6 for the female and male urethras. They are convenient means of simplifying a valuable technique. In many cases no medium of contact with delicate tissue is equal to water, and the Dow set should be very useful.

Felt-covered electrodes, especially suitable for dispersing pads for all galvanic currents up to high intensities obviate the need of clay in most cases.

In my remarks on electrodes in my book upon Treatment of Disease by Electric Currents these are described and instructions given for minimizing resistance. The felt used is three-eighths of an inch thick and of fine white wool, which is first cleansed of all fatty matter and then holds moisture and conducts a large dosage with comfort. A little care will enable the operator to apply 150 mil. in uterine treatment with this form of electrode without resorting to the mussy clay.

They can be made in any desired size or shape and are covered with a backing of soft rubber. A set of six sizes from 2x2 up to 7x10 will be found very useful.

They are the most practical, simple and satisfactory galvanic electrodes for the purpose that I have ever employed.

ELECTRICAL INJURIES MISCALLED X-RAY INJURIES.

At this date it might be supposed that sufficient had been published in prominent journals to inform the entire profession of the cause of the occasional dermatitis reported by a few workers with X-rays.

There are, however, many who still assume that the X-rays themselves cause the burn, though a little reflection would show that if this was true there would be thousands of cases instead of a few dozen. The main point I now wish to make refers to the use of static apparatus with Crookes tubes.

Several correspondents write me that they understand me to claim that the static current does not

cause a burn, and go on to notify me of a case reported. My experience demonstrates that with proper management the direct static current tends so little to cause injurious action upon the skin that it is easy to avoid all trouble, even when working continuously with tubes for several hours. I have, however, seen evidence that by condensing the current through Leyden jars and by non-expert methods of employing tubes which really abuse the apparatus, even without condensers, and by persisting for a long time, a dermatitis can be set up.

To set forth my early and present position in regard to static burns it may be best to quote from what I have previously written:.

"While there is no mechanical device which cannot be abused, yet if any physician with a Holtz machine and one of the author's tubes would start out in the morning with the deliberate purpose of inflicting upon himself a 'dermatitis Roentgen' by nightfall of a long summer's day he would be baffled in the attempt if he employed the proper method.

"The direct static discharge of high potential and infinitely small amperage does not produce electrolytic or chemical effects upon the human tissues without X-rays, and consequently does not produce such effects in conjunction with X-rays."

If the current is transformed by condensers or backed up by the resistance of a high vacuum tube, and if a powerful spark interruption is maintained, the current is altered and my statements, above quoted, do not apply to the condition. Everyone who uses a static machine certainly knows that by the use of a covered electrode vesication can be caused by a static application, but this ancient fact does not make a sedative breeze vesicate. The term "proper method" must define the scope of my assertion that the static current is safe, for it certainly does no harm ordinarily, and must be used under altered conditions to cause dermatitis.

As proof of this there comes to my notice the experience of an X-ray exhibitor whose hand is now inflamed to a moderate degree. He tells me that during a special exhibit he exposed the back of his hand at close range for a total of 20 hours, divided between two days. The current was pushed to its utmost. There were but two tubes employed, one being kept going constantly for six hours. They were the "Monell Static Tubes" and remained in working order despite this severe use.

In about ten days a dermatitis appeared, but has not proved to be very severe. A powerful spark was used and the hand often was in actual contact with the bulb.

This bears out all my assertions about the slight liability of this form of current to do damage in X-ray work. The operator was sufficiently skilled in handling tubes, but was not familiar enough with static apparatus to regulate the current nicely and avoid an excess when not needed.

Had this been done he would have been able to keep his hand free from injury, especially if he had used reasonable caution as to distance. He, however, had a firm belief—not correctly understood—that it was impossible by any use of static electricity to cause an inflammation of the skin.

Had he not been so convinced of this by his previous immunity while exhibiting for several months, often subjecting his hand to long exposures—once as long as six hours without harm—he would have been more careful.

So rarely is an injury caused by operators using static machines correctly that alarm may be dismissed from patients' minds and they may be assured of entire safety.

Clinical Medicine.

In charge of Dr. J. J. Morrissey.

THE TREATMENT OF CONSUMPTION BY PROFESSOR VON LEYDEN.

J. J. MORRISSEY, A. M., M. D.

To the general physician one of the most important papers read at the International Medical Congress was that of Von Leyden, of Berlin, on "The Present Modes of Treating Consumptives and Their State Control." The subject may be considered to be of a somewhat hackneyed character, for not only the medical press, but the public prints are daily and weekly filled with discussions on consumption, and yet the last word has not, nor will not, be said, we fear, for many years concerning this dread disease, so that if any new measures are considered for the relief of that great army of suffering humanity afflicted with tuberculosis they should immediately claim our attention. Unlike many of the acute diseases we have to contend with in our daily practice, the proper treatment of phthisis depends far more upon preventive methods than the adoption of any measures which have for their ultimate aim the destruction of the insidious bacilli.

Thus we have a verification of Oliver Wendell Holmes' dictum that there are many diseases which should be treated a hundred years before the patient is born. In this category we may place consumption, which to an eminent degree may be treated successfully ere we arrive at the stage of applied medicine. We do not believe that the disease is transmitted directly from the parent to the offspring, but that the tendency or predisposition—call it what you will—is handed down is unquestionable.

There must be some inherent peculiarity of structural formation, requiring but slight pathological modification, to develop retrograde tissue in which the bacilli rapidly thrive. The susceptibility to the encroachment of tuberculosis is especially well marked in some families. This is a matter of common observation and not entirely explained by environment; the latter may be a powerful factor in rapidly bringing to the fore the hidden causes of the diathesis, yet it does not explain but a part of the problem. One member of a family may entirely escape the death warrant issued against all the others dying from phthisis, and die of some other disease foreign to any affection of the lungs. On autopsy there is found no disintegration of lung tissue, no circumscribed focal point around which the disease is centralized, and yet his surroundings and mode of living may be the same as those who died. It is impossible to explain these inconsistencies, as they appear

to us, of nature. "Survival of the fittest" is but a trite phrase, which only beclouds our intelligence and dwarfs our efforts.

Professor von Leyden, whose brilliant achievements in every department of medicine lends an added lustre to any statement he may make upon this subject, does not believe in heredity, but claims that in the majority of cases the disease is transmitted to children by contagion from their parents and not by inheritance. Our preventive measures therefore should be conducted along two lines: (1) The prevention of infection, and (2) the strengthening of the body to resist the attacks of the pathogenic agent. The latter can be accomplished by bringing up children with Spartan severity and by shunning every approach to coddling. The whole matter, then, so far as the second consideration is concerned, becomes a question of excellent living, of fortifying the physical, moral and intellectual faculties of the child; in other words, it is simplified education. The child should be taught the supreme importance of every deviation from the standard of health, so that it might be corrected at the earliest possible moment. He should adopt those forms of exercise whose object is the development of the muscular tissues, for with his blood enriched with good oxygen it will be well-nigh impossible for the bacillus to find a suitable source for propagation.

This means good air, the use of bath, open sleeping apartments, a suitable diet, and in a word, the use of every measure whose end is the development of the body. These excellent means cannot always be adopted, but parents as far as possible should be taught the absolute necessity of thus training their children.

When the disease has been contracted other means are to be used, and in the past change of climate was easily among the first. There is no question as to the beneficial effects to be derived from a change of climate in certain well-selected cases, but it is to the individual more than to the disease that we must look before advocating such a measure.

Many poor consumptives have been sent hundreds and thousands of miles from their homes to die in some boarding house, surrounded by strangers, who might in all probability have been much better off to have remained where a kind word and a gentle touch would have at least alleviated the sorrowful parting. The change of diet, the depressing influence of being alone, the fear of rapid dissolution, these counterbalance many of the so-called benefits to be derived from a change of climate.

To one who returns cured from the South or the West hundreds die, and therefore it is that many physicians are chary of sending their consumptive patients traveling in an exhausted condition to some Western town, where they eke out a miserable existence for a few months.

Many considerations should govern physicians in the matter of selecting a suitable place for their patients, and the primary consideration should be the individual more than the disease, though the stage of the latter should receive due reflection. Professor von Leyden claims that the assumed specific action of fresh air in tuberculosis is one of the myths of medicine. It has no such action, but its value is purely of a hygienic character, since it adds greatly in strengthening the organism and rendering it more resistant to the attacks of the pathogenic organisms. To the nourishment of the consumptive he pays particular attention. The day for the universal prescription of cod-liver oil has passed. Experience has demonstrated that the more food the consumptive takes and digests the better are his chances of recovery. So far as alcohol is concerned, our ideas have been revolutionized. A plentiful supply of alcohol was considered an indispensable part in the past of the treatment. It is now given in much smaller quantity, for it is neither a suitable food nor a destroyer of germs. Hydrotherapy is a powerful agent in the treatment of phthisis, and consists in cold sponging, showers and short, cold

plunges. In Germany they have established "sanatoria" for the sole treatment of consumption, where the various measures spoken of can be carried out with precision and accuracy. The idea of forcible segregation of the tuberculous was abandoned as being only apparently humane and really inhuman in its consequences, but it resulted in the determination to establish public sanatoria where the poor could receive the same care as the well-to-do in private institutions. At present there are 20 sanitoria in course of construction or already in working order.

In this country only to a slight extent have we emulated the good example set us abroad. In the treatment of the large number of consumptives which abound in every large city there is opened a field for philanthropic activity, second to no other agency of beneficence. The large general hospitals cannot treat tuberculosis as it should be treated, and it is a crying shame that in this metropolitan city there is but one institution devoted solely to the consumptive. This hospital—St. Joseph's—is conducted by the Sisters of St. Francis, who are doing all that human hands can do with the limited means placed within their power.

Voluntary subscriptions and contributions are their only means of support, but we trust that now, when the proper treatment and management of tuberculosis are commanding such deserved attention, an enlightened public opinion will demand public support.

Current Medical Literature.

DIAGNOSIS OF DIABETES FROM STAINED SPECIMENS OF THE BLOOD.

Ludwig Bremer describes a simpler method than the one which he originally proposed. A drop of blood is spread over a third or half a slide and is then exposed to a temperature of about 135 degrees C. for six to ten minutes. As this latter part of the procedure is important, it is discussed in detail. A temperature of 140 degrees should not be exceeded. When the thermometer registers 130 degrees the gas flame should be taken away from the oven. The optimum of temperature lies about 135 degrees, and below 129 degrees the test becomes unreliable. The slides are then placed in suitable dishes containing the stain. A control specimen must always be made. The eosin methylene blue preparation first used by the author is difficult to make and unreliable. Congo red, methylene blue, Biebrich scarlet and the Ehrlich-Biondi stain all give excellent results. The first three are used in 1 per cent. watery solution. After an exposure of one and a half to two minutes to Congo red the diabetic blood is either not stained at all or only indifferently so, while the non-diabetic blood is colored red. Methylene blue acts in an analogous way, but Biebrich scarlet stains the diabetic but not the non-diabetic blood. Ehrlich-Biondi's stain colors diabetic blood orange and non-diabetic blood intensely violet. Very successful specimens can be made if a contrast stain is used. Thus, specimens may be stained with a 1 per cent. watery methyl green for one and a half to two minutes, when both specimens appear green, but especially the diabetic blood. The counter stain is a 1 per cent. watery eosin applied for eight to ten seconds. The diabetic blood remains green, but the non-diabetic stains red. Many other stains are mentioned, but the results obtained with them are not so good. The specimen may be taken out of the stain so that the staining can be controlled. Rapid washing and then drying are desirable. Whether the difference in reaction is due to the different alkalinity of the blood must still remain an open question.

—Centralbl. f. inn. Med., June 5, 1897.

MUSICAL MURMURS IN HEART DISEASE AND ANGINA PECTORIS.

Tecce draws attention to a special variety of musical heart murmurs which he describes as resembling a feeble groan or the chirping of chickens. For certain similar cases described by Capozzi, in which a constant lesion was found—namely, a regular perforation of a free valve—the author was led to diagnose such a condition in the case of a man, aged 30, who was admitted into hospital suffering from anginal attacks. On auscultation a double aortic murmur could be heard, the diastolic part of the murmur being musical, and like the chirping of chickens. The apex beat was in the fifth space, and outside the nipple line. There was no history of rheumatism, but the patient was much exposed to wet and cold. He contracted syphilis at 21. He died in one of the attacks of angina, and post-mortem the mitral valves were found normal, the aortic valves thickened, and stenosis, two cusps being adherent; the third was perforated near the aortic parietes, but not adherent. The coronary arteries were healthy. The aorta was atheromatous. The author looks upon angina pectoris as a neuralgia of the cardiac plexus.

—La Rif. Med., April 2, 1897.

PROPHYLACTIC INJECTIONS OF BEHRING'S SERUM.

In the Berliner klinische Wochenschrift for August 9 Dr. F. Rauschenbusch describes a most interesting case in which toxic symptoms followed a prophylactic injection of Behring's antitoxic serum. There were two cases of diphtheria in the doctor's own house, and in order to prevent the extension of the disease to the other members of his household, each one (five in number) was injected with 200 units of antitoxic serum, all the five members being injected from the same bottle, which contained 1000 units. In four out of the five there were absolutely no untoward results, but in one of the three children (a perfectly healthy girl) curious symptoms developed very rapidly. This child, aged 10 years, five minutes after the injection developed a marked eruption at the seat of injection. This eruption rapidly extended up the thigh and on to the right side of the face. It was accompanied by very great itching, and ten minutes later the whole body, especially the face, was covered with a dark scarlatinal-red rash, and the child fainted. A warm bath relieved the itching, but as soon as the child was taken out it again fainted and remained in a collapsed condition until it was placed in a horizontal position. The radial pulse could not be felt on either side, and the heart, though regular, was exceedingly weak. The pupils were dilated, and were sluggish. The child was sleepy, it answered slowly, and the skin was cold and pale. The scarlatinal rash soon disappeared except on the face. Two hours after injection there was vomiting, after which the general condition of the patient improved, but the heart weakness remained. Eight hours later there was itching of the hands and feet, both of which, as well as the face, were swollen and edematous. There was some swelling in the mouth, giving rise to difficulty in swallowing. The condition of the heart continued to improve, but at this period the radial pulse was still almost imperceptible. The urine, of moderate amount, was of a dark red color, but it contained no albumen. Next morning the heart was stronger, and the patient continued to improve. Dr. Rauschenbusch, while still believing in the efficacy of Behring's serum, comes to the conclusion that there must be individual predispositions which make it necessary that care should be exercised in administering this substance. It is interesting to observe, however, that the same girl two years before had been injected with 600 units during an attack of diphtheria, and that there had then been not the slightest reaction. The two younger children suffering from diphtheria also received 600 units, and were not affected in the slightest degree. It is evident from the whole history of this case that for some reason or other hemolytic changes had taken place with considerable rapidity. Whether this is due to peculiarities in the blood, to a want of coagulative power, or some similar condition, is at present a matter for careful consideration. This case is of very great interest to the practitioner who has to inject prophylactic doses of serum where diphtheria has obtained a footing in a household. Dr. Rauschenbush's only suggestion is that the prophylactic dose should be diminished in amount.

—The British Medical Journal.

VARICELLOUS LARYNGITIS.

Harlez draws attention to this important complication of varicella, confirming the previous observations of Marfan and Halle, and adding other cases of his own. In all instances the symptoms were those of croup, and in fact such was the original diagnosis of each case; raucous cough, loss of voice, retraction, dyspnea, suffocative spasms, and asphyxia were constantly present, but in none of these cases was there the least appearance of membrane, and no Loeffler bacilli were ever found. The specific character of the disease was very clear, there being small circular ulcerations on the vocal cords, and often on the epiglottis. The author points out that this complication is more especially met with in children, particularly those of

weak constitution, and the younger the child the worse the prognosis. The character of the eruption also bears upon the prognosis, for in one case which recovered the eruption was discrete, while in some of the others it was of the hemorrhagic variety, and in one instance confluent. In the only case of recovery which came under the author's observation had there been resort to tracheotomy. In all the others death was due to either spasm of the glottis or broncho-pneumonia.

—Journ. de Med., June 25, 1897.

A CELEBRATED CASE.

Provost Pepper, of the University Hospital, Used this Man in His Clinics in 1894—No Hope in Medicine for Him—Now Getting Well by the Use of Rennyson Tredyffrin Water—No Other Remedy Used—A Letter From Him that Will Explain His Situation.

From the Star of the Cape, Cape May, N. J.

About one year ago Captain William Rennyson, editor of the Daily Times, Norristown, Pa., who owns a fine country seat in Tredyffrin Township, Chester County, accidentally discovered that the waters of a fine, strong spring were, upon analysis, of a highly medicinal character, and already it has the best reputation where known of any water sold and is uniformly preferred by those who have tried other mineral waters as more efficacious. The proprietor has already received a very large number of the strongest testimonials from the immediate region of the spring, so that when we were handed the booklet of testimonials we found that among those receiving the most remarkable cures were several personal acquaintances.

Mr. William H. Reeves, of West Cape May, a veteran, who has been greatly afflicted with rheumatism for 33 years, contracted in the army, has also experienced a wonderful change by the use of Tredyffrin water in a comparatively very short time, as described in his letter to the proprietor of the celebrated mineral spring, given below:

Cape May, N. J., February 24, '97.

Capt. Wm. Rennyson, Norristown, Pa.

Dear Sir—I have been anxious for some time to write to you to acknowledge the debt of gratitude I owe you for the wonderful change your lithia water has wrought upon me.

I contracted rheumatism in the army from severe exposure, which gradually increased in suffering, until during the last ten years I have been almost entirely helpless in every way, not being able to walk for now over three years. And I had reached that stage when I could not raise my foot without pain and then not more than two inches without help. Indeed, it was with extreme pain that I was moved at all, and was not at any time free from great soreness and pain.

It was in this condition that a friend called upon me and spoke of his knowledge of great benefit which had been enjoyed by three or four of his acquaintances by the use of this valuable water. I, therefore, felt interested to give your water a trial. I did not expect in my long-confirmed case immediate benefit, but I was surprised that before I had finished taking the first bottle I felt some decided improvement in my appetite and sleeping. On account of my pains I could not for over two years sleep without the regular nightly use of morphia, but now I am free from the soreness and pain and sleep well throughout the entire night. And I have such use of my lower limbs now that I can lift them from the floor to a chair without the least pain.

I have been under treatment by some of the most celebrated physicians in Philadelphia, as well as the most noted in this section, for the last ten years, and derived no permanent benefit nor relief from my sufferings, and felt that I had nothing to look forward to but continuance in great pain and the probable aggravation of my disease and suffering to the end of my life. I am very anxious, therefore, in this condition to avail myself of the trial

of your excellent water, of which I have used less than two cases, with the blessed result mentioned above. And I feel that it is due to you, as well as to many sufferers like myself, that I should make my case known to the public.

Yours respectfully,

WILLIAM H. REEVES.

Mr. Reeves is one of the most conscientious and best-known men in this vicinity, having held among other offices of public trust the position of Assessor, both in Lower township and in the borough of West Cape May, for over 18 years. And to anyone wishing to consult Mr. Reeves as to the virtue and value of this water in his own case he will be only too glad to impart the fullest information.

Ed. Star of the Cape.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

THE MECHANICAL TREATMENT OF HEMARTHROSIS OF THE KNEE.

Salaghi draws attention to the value of massage and passive movements in the treatment of traumatic hemorrhage into the knee-joint. Cases of intraarticular fracture or rupture of ligaments are excluded, but in genuine hemarthrosis from contusion or sudden distortion (for example, in cycling accidents with hyper-abduction of the knee), massage gives excellent results by promoting rapid absorption of blood and lessening the chance of damage to the joint from changes in the effused blood. The author experimented on a rabbit by producing hemarthrosis in the two knees, massaging one and leaving the other alone. Judged by the swelling, etc., the lesion was the same in each joint. After a time the knees were examined. In the massaged joint the blood was absorbed and no changes of importance were detected. In the other joint three hematomata were seen in process of organization. In time they would have become loose bodies in the joint.

—Archiv. di Ortoped., An. 14, No. 4.

TREATMENT OF EXOPHTHALMIC GOITRE.

At a recent meeting (July 27) of the Academy of Medicine, of Paris, a paper by Jaboulay was read dealing with 9 cases of section of the cervical sympathetic for exophthalmic goitre. The results were good, both with respect to the exophthalmos and to the goitre and palpitations. The best effect was obtained in young people in whom presumably the accelerator system of the heart was less developed and more thoroughly modified by the division of the sympathetic. In cases of failure of the treatment, an explanation might be found in the existence of two sympathetic cords in the neck—a not infrequent anomaly. At the same meeting Doyen reported two cases of exophthalmic goitre successfully treated by thyroidectomy. He preferred this operation to division of the cervical sympathetic, both on account of its safety and for its beneficial results. Such cases seemed to demonstrate the pathogenic role played by hypersecretion from the thyroid.

—Progres Med., June 31, 1897.

SUPPURATING CHONDRO-OSTEOSARCOMA OF BREAST.

St. Arnold, of Lucerne, describes an interesting case of this rare disease in a lady aged 67. She had noticed, in the spring of 1895, a swelling in the left breast, but her family doctor believed that it had already existed there for some time. Diagnosis at first was doubtful. The swelling grew steadily and became painful. After traveling the patient consulted a doctor at Zurich, and he diagnosed mammary abscess. As pus escaped he naturally believed, when he had made an incision, that his original opinion was correct. The

swelling, however, increased, and fever set in, with extension of inflammation to the circumference of the breast. The patient became exhausted and slightly delirious. Luning found the breast much swollen and surrounded with dilated veins and lymphatics. In the midst of the swelling was a cavity packed with iodoform gauze. Its walls were very firm, and it discharged fetid pus. The axillary glands were not enlarged. Lysol was freely applied, but the temperature rose over 105 degrees, and the patient seemed too weak for an operation. At the end of a week, after she had been under Luning's care she seemed worse, and nothing appeared of any avail except to remove the focus of suppuration. The breast was therefore amputated and the wound thoroughly drained. Two days later the fever had disappeared. Two months after the operation the patient was in excellent health, and there was no sign of recurrence. The tumor was very tough and full of small tuberous masses. On examination St. Arnold found that it was a sarcoma containing bone and cartilage.

—Virchow's Archiv, Vol. cxlviii, part 3, June, 1897.

PERFORATION OF THE GALL BLADDER.

Fuchs relates an interesting case following upon an acute cholecystitis, and successfully treated by operation. A woman, aged 27, was seized on the fifth day after labor with severe pain in the epigastric region, and radiating into the back. The attack lasted for half an hour, but a second attack occurred a fortnight later, and was followed by slight jaundice. Two days later there was a further attack. The next attack, two days afterward, was very severe, and on the following day the patient was very ill. The abdomen was distended and there was great tenderness and prominence in the region of the gall bladder. The diagnosis of perforation of the gall bladder with a commencing peritonitis was made. The operation was begun by Mikulicz about 24 hours after the onset of these severe symptoms. A fibrinous deposit was seen upon the intestines. The greatly distended gall bladder was exposed and punctured, 40 c. cm. of a turbid, ill-smelling fluid being drawn off. The gall bladder was then opened, and the finger introduced, when an opening was found near the cystic duct leading into an abscess cavity. Thirty-four stones were extracted from this cavity. The common bile duct was distended, but contained no stone. The abscess cavity was washed out and a drainage tube inserted. The infected part of the peritoneal cavity was tamponed with iodoform gauze. The patient's progress was very satisfactory. Eleven days after the operation the drainage tube was shortened and the iodoform gauze tampon discontinued. Eventually the wound closed, so that the patient left her bed about four weeks after the operation. The author would look upon the case as one of acute ("idiopathic") cholecystitis accompanied by severe septic manifestations and complicated by perforation of the gall bladder. He would appear to think that it arose independently of the gall stones present in the case. A limted fibrino-purulent peritonitis was present. Thus the case is to be placed alongside other cases of perforative peritonitis cured by operation.

—Berl. klin. Woch., July 26, 1897.

Current Literature in Obstetrics and Gynecology.

PRIMARY TUBERCULOSIS OF THE EXTERNAL FEMALE GENITALS.

De Paoli reports five cases of primary tuberculosis of the external female genitals, which is not so rare as generally believed. Children and adults are alike liable to be affected, and this may occur by direct inoculation, for example, through sexual intercourse. The tuberculous lesions are localized in the early stages, by preference, around the urinary meatus and clitoris, whence they are slowly diffused. Clinically it is characterized by more or less extensive ulceration, with elephantiasis-like thickening of the labia. The course is chronic, and the disease may remain for a very long period localized in the external genitalia. The inguinal glands are not affected as often as one might expect. Extensive local disease may exist without causing notable alteration in the general health. Histologically there is a rich inflammatory infiltration and abundant vascularization of the altered tissues. Caseous degeneration is rare, and there is a tendency to spontaneous repair. Secondary tuberculosis of these parts presents a more rapid course and a greater malignity. Energetic surgical intervention may bring about a complete cure, and resection even of extensive portions of the urethra may be practised without materially disturbing the emission of urine.

—Annali dell' Univers. di Perugia, Vol. ix, f. 1.

PREGNANCY AND SYPHILIS.

Edward P. Davis advises inspection of the genital tract before mak- and a diagnosis of syphilis. The anemia of syphilis was responsible for its most dangerous effect upon pregnancy. If iron and arsenic were given freely, with inunctions of mercury, the woman might be carried through. Anemia was very important in syphilitic children also. The mother was often in such bad condition that modified milk was better for the child. Syphilis sometimes caused an endometritis, though there might be no other symptoms of the disease.

—Amer. Journ. Obstet., June, 1897.

IS THE VAGINA IN NORMAL PREGNANCY ASEPTIC?

Goenner has carefully investigated the normal secretion of the vagina in healthy pregnant women. He finds that it contains anaerobic bacteria, not such as cause primary septic endometritis, but those which can be easily introduced from without. As in the case of streptococci which set up puerperal fever, the germs in the vagina do not represent auto-infection, but are brought there by the medical attendant, the midwife, the nurse or the instruments. Septic endometritis, often indicated by fetid liquor amnii, may be excited by the bacterium coli.

—Centralbl. f. Gynak., No. 24, 1897.

THE PNEUMOCOCCUS IN PREGNANCY.

Vinay observed a patient who suffered from great gastric irritability during pregnancy. Multiple abscesses appeared during the seventh month; the pneumococcus was found in the pus. The patient died 19 days after delivery.

—Revue Obstet. Internationale, May 21, 1897.

DECIDUAL TISSUE IN PERITONEUM IN NORMAL PREGNANCY.

Schmorl confirms a very important observation of Pels Leusden that little nodular masses of tissue resembling decidua may be found in the pelvic peritoneum in normal pregnancy. He examined 30 bodies. These nodules were once thought to signify abdominal gestation. He declares as a rule the peritoneum of Douglas' pouch is thickly studded with these collections of tissue; the ovaries also bear them. The decidua-like material appears to develop in the subserous connective tissue and undergoes absorption or calcification after delivery. The deposit is typical of pregnancy.

—Monatschrift f. Geburtshulfe u. Gynak., Vol. v, 1897, part 1.

Miscellany.

TREATMENT OF EPILEPSY.

Percy Bryant alludes to the repeated failures to find a morbid anatomy for idiopathic epilepsy in the nervous system, and holds that such facts as are known concerning the cause of convulsive seizures, as illustrated by uremia, etc., point rather to a toxemic origin than to any pathological change in the brain or spinal cord. The following method of treating epilepsy has been adopted with considerable success during the last five years at the Buffalo State Hospital: The administration of bromides has been abandoned as unnecessarily severe, and as useless in that their good effect is merely temporary; in fact, Bryant goes so far as to say that their exhibition really adds another condition, which has to be contended with, namely that, added to the epilepsy which has not been cured there is now bromism, developed as a result of treating the former disease. His treatment, briefly, is a combination of a milk diet with suitable exercise and the immediate relief of any symptoms of constipation by cathartics and enemata. A patient suffering from the psychical manifestations of the disease is purged and has all nourishment entirely withdrawn for a sufficient length of time to give the requisite rest to the digestive organs, nothing but water being meanwhile allowed. At the end of two days abnormal hunger disappears. After three or four days of this abstinence—even eight or ten days in the case of violent mania or status epilepticus—a small quantity of milk is allowed; this is gradually increased from one to six glasses between morning and evening, and persisted in for several weeks, if not months. The condition of the digestive organs is to be the guide, and not the physical condition of the patient. After two to four months a gradual return to the regular diet is permitted, but an immediate resort to the above is to be had on the reappearance of any symptoms of toxemia. Drugs aiming at intestinal antisepsis, however, theoretically indicated are in practice found to be able to exert but feeble antiseptic powers. Chronic idiopathic epilepsy is incurable, and, at the best, only amelioration of the symptoms can be hoped for. It is only during the early stages of the disease that substantial results from treatment can be expected.

—State Hospitals Bulletin, October, 1896.

THE PATHOLOGY OF APPENDICITIS.

Abbe, in a paper on the "Appendix 'in the Interval,'" describes a new method of preparing this organ after resection, which, it is stated, shows the causes of appendicitis in its several varieties, and affords an explanation of the clinical symptoms of chronic cases. The removed appendix is distended with alcohol (95 per cent.), and after immersion for 24 hours in alcohol of the same strength, sliced from end to end. Whereas the outside may preserve the cylindrical form of a normal appendix, the interior—if the patient has had one or more attacks—will show one or several of the following conditions: (1) A fecal concretion blocking the canal, (2) interior ulcerations, (3) cicatricial strictures, (4) multiple strictures with intermediate pockets containing suppurating and catarrhal products, and confined by greatly hypertrophied muscular and mucous coats, (5) partial obliterating appendicitis. The author's study has led him to assign three distinct causes of obstruction of the appendix, which leads to gangrene, perforation or rupture. Catarrhal inflammation alone, it is believed, may be followed by stricture. A natural point of flexure in the appendix, due usually to localized shortening of the mesentery, may lead to an arrest of its fecal contents, which, becoming inspissated, grew into a concretion. Thirdly, an otherwise healthy appendix may be effected by circular ulceration, due probably to microbic action. Abbe is a strong advocate of removal of a chronically inflamed appendix. Spontaneous cure certainly may occur, but the patient in the course of the curative process will run the gauntlet of many attacks in which distension of the pockets between the strictured portions may cause fatal results. Morover, the final obliteration of the canal will not always relieve the patient of pain.

—Medical Record, July 10, 1897.

The American Pediatric Society is making a collective investigation of infantile scurvy, as occurring in North America, and earnestly requests the co-operation of physicians, through their sending of reports of cases, whether these have already been published or not. No case will be used in such a way as to interfere with its subsequent publication by the observer. Blanks containing questions to be filled out will be furnished on application to any one of the committee. A final printed report of the investigation will be sent to those furnishing cases.

(Signed)

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ROYAL COLLEGE OF SURGEONS
4 NOV 97

The Times and Register.

VOL. XXXIV. No. 8. PHILADELPHIA AND BOSTON, OCTOBER 23 1897 WHOLE No. 948.

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Original

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

THE ESSENTIAL ELEMENTS OF TRUE TUMORS.

Having in the preceding sections of the study of tumors or tumor-like formations dwelt chiefly on the clinic features and similar characters of heterogenous masses, in many particulars bearing a close resemblance to neoplastic masses, it now remains with the limited space at our command for the remainder of this year to enter on, as fully as possible under the circumstances, the subject of true tumors, the benign as is generally understood, the malignant and that large class which both histologically and clinically occupies middle ground, the mixed.

Here, at the threshold of our undertaking, the pertinent question is

pressed on us—What is a tumor anyway?

This would seem a question easy of solution and readily answered by any tyro in surgery; it is one, however, which has not been answered yet, although there are endless definitions, for many phases of pathologic transmutation or degeneration are wanting in the physic features of what would support the derivation of the term, inasmuch as there is no augmentation of volume, but a destructive advance and final obliteration of the organ or structure first seized on.

Nevertheless some working scheme as a nosologic basis must be adopted, and the usual definition is rather relative than positive.

This confusion and obstacle was fully realized by Delbet in the opening chapter of his and Le Dentu's late superb and exhaustive work, when he declared "that the study of neoplasms constitutes one of the most obscure and difficult in the whole range of pathology, for while the immortal discoveries of Pasteur and his disciples scattered far and wide a brilliant light on a number of maladies, neoplasms remain enshrouded by an impenetrable obscurity, as, in spite of the accumulated efforts of many, we yet know nothing definite of either their pathology or etiology. Our knowledge is limited to an acquaintance with their evolution and morbid anatomy only."

Ranvier defined a tumor as "any new mass, constituted by a new formation manifesting a tendency to persistent increase." To this Heurteux added: "Any or all masses constituted of new elements having a tendency to increase independent of inflammatory action." Quenu, one of our latest and ablest authors on oncology, defines a tumor as "a new formation, distinct from all inflammatory processes." Delbet tells us that a tumor is "a neoformation constituted by a new tissue, engendered by super-activity of the cellular elements, which has for its character a typical development more or less permanent. Definitions might be multiplied without in any manner further solving the question, for every one which I have seen are defective and vulnerable, and are not one whit more truly descriptive than Percival Potts' plain, laconic and homely description, viz., that "a tumor is a swelling that kills, generally painful, highly vascular, the malignant always ulcerating.'

In order to intelligently pursue our studies of the common origin and the natural history of tumors something like a systematic classification is desirable. This may be reduced to two divisions, viz., a clinical and an anatomic separately, but for all ordinary purposes the latter will suffice, except when we commence to separate in a general way the benign and malignant.

This basis of the division here submitted will be anatomic and histologic, on the microscopic elements, the classification being on the lines of my former teacher, the celebrated anatomist and pathologist, the late Dr. Carl Heitzman. This is the most natural and rational, as it quite entirely conforms with the principles of those investigators who deny the production of any really new tissue elements in any tumor, or, as Green puts it, that "there is no element foreign to the normal tissue cells in any growth, as the prototype of all may be found in the healthy tissues of the body."

Conhenheim's doctrine of the embryologic origin of tumors has made its impress on the classification of many modern authors, but as the German pathologist's theories have not received the unreserved support of the greater number of authorities and are in direct conflict with Virchow's views and Sir James Paget's conclusions, it has been decided to submit such an arrangement here of the various groups as will deal particularly with anatomy, speculation and theorizing aside, thus steering clear of conflicting conclusions on the question of which part, if any, the primordeal structures the mesoblast, the epiblast, the cetoblast and the blastemic structures play, as etiologic factors in fetal existence.

—Pierre Delbet, Traite De Chir., Par. M. M. Le Dentu et Delbet, Vol I, p. 393, 1893.

Society Reports.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

By Our Special Correspondent.

The Twelfth International Medical Congress is past and gone into history. It now remains to deal with the colossal assembly of physicians rather than to make any comparative estimate of its scientific achievements.

A year or more ago it was expected on this side of the Atlantic that the contingent from America to the great city of the Muscovite nation would be a very large one.

It seemed that common gratitude to our powerful and faithful ally would demand the cordial and active participation of a large and influential delegation from America. Besides, the Congress was being held in the holiday, or vacation, season, and gratuitous transportation was promised to all duly accredited delegates from the Russion frontier to Moscow and St. Petersburg and return. Of English-speaking nations it was naturally expected that England would take the lead, because of its geographic position and front rank in medical science, but this year the British Medical Association assembled in Canada, and for certain political reasons, it appears, Russia was indifferent to English patronage, and hence it was only at a late date that the managers of the Congress consented to recognize English as one of the official languages.

As the time for the Congress approached it was clearly evident that neither England nor America would cut a figure in the way of numbers. Our local committee on management had been quite entirely ignored until it was too late to provide delegates with their necessary credentials and transportation. Mexico, Central and South America were well provided for, but the United States had been quite entirely overlooked. Further and urgent appeals from Americans, with few exceptions, in London, Paris and Vienna generally met the same fate. Native American physicians are but indifferent linguists, and the Slavonic language possesses no affinity whatever to English, French or German. The police regulations in Russia strike the stranger as oppressive and tyrannous. All these circumstances combined to awaken a sense of apprehension and distrust among the English-speaking delegation on their way to the far East, with a result that but few attended the Congress.

But there were several who were not to be deterred by trifles and pressed on to the frontier, the writer among the number, entering Russia by way of Prussian Poland.

Reaching Thoru at 5 A. M., there was a delay of seven hours before a train left for Alexandrovo. At 4 P. M. the Russian frontier was crossed, when the order came for passports and the custom officials went through the baggage.

Finally the promised land was reached, when our eyes were opened

to a full realization that our misgivings were not altogether ill-founded.

The promised "committee of Russian physicians who could speak English, French and German, who would welcome the delegates and provide for their needs, etc.," were not in evidence, nor indeed a physician of any description, and though yet only on the Polish frontier it was clearly evident that one was, as it were, in a new world.

The language, the dress and general appearance of the people seemed so unlike any European cast we meet with in America, owing to the fact that, except the Hebrews, few Russians emigrate. As there had been a very large number of the delegates entering by this portal to Russia on the preceding days there was but miserable accomodation on the antiquated coaches which had been drafted into service. At Warsaw, through some oversight or neglect, the writer's passport was not forthcoming, and he was held by the gendarmes until another train arrived with it, six hours later. This misadventure entailed the missing of the Moscow express and a day's loss of time through the tedious and slow pace of a mixed train.

Leaving Warsaw late in the night we awoke in the morning to fully realize that the main peninsula of Europe was passed and that the vast Slavonic nation on its far East and extending into Asia, was being approached. The lofty average stature of the Russian, the heavy, swarthy features, the long beard and bronzed visage stamp him with a distinct individuality, nearer approached by the Teuton than any of the European races.

Entering Moscow one realized about the same disappointment as in Rome at the last Congress.

Committees on reception, it is true, there were, but they sat only a few hours in the day. On these committees were several who had a good knowledge of French and some German, but their English was quite incomprehensible.

It was intended that these committees were to provide hotels, but all the hotels were overcrowded before the Congress opened, and the demand on lodgings, where no word of any language was known except Russian, offered but a comfortless prospect to the stranger, and, besides, at this stage extortionate rates were demanded, which might have been very well with those carried over a thousand miles free transport, but was by no means relished by those who had met all their own expenses.

In two or three respects the Congress was certainly a notable success—first, in point of numbers, for probably more than 10,000 registered. The sovereign or the ten roubles opened the portals for anyone, from anywhere, medical or not. The consequence was that the jam, with the intense tropic heat of the day, was too much for the timid and non-acclimatized from the West, and hence before the second day's session opened more than a thousand delegates had stampeded out of Moscow for their homes.

In the bringing together and comingling of about all the civilized races of the world, especially from the East, India, China, Japan, the English, French and Dutch Colonies, this assembly furnished a most extraordinary exhibition, for there was a perfect babel of tongues when the widely separated nations discoursed in their own language.

One redeeming and conspicuous feature, which overshadowed all others, was the unbounded and unrivaled hospitality of the Russian profession and citizens. Receptions, dinners and excursions began with the Congress, and in all truth it may be said that the voyageurs gave these more of their time than the section meetings, where the confusion of tongues, the oppressive heat and slim attendance offered but little attraction.

On the first day the Congress was formally opened by the Grand Duke Serge Alexandrovitch, as representing the Emperor. On each successive day general meetings were held in the Grand Opera House, where the addresses were made by the selected delegates of different nations.

Naturally the great attraction for English surgeons was the masterly

address of Dr. Nicholas Senn, of Chicago. Then came Sir Dyce Duckworth with an address of great interest and importance on "Cases of Cerebral Diseases in which Respiration Ceases Some Hours Before the Circulation."

Other addresses of a notable character were presented by Lambrosa, on "The Influence of Climate on Anthropologic Characteristics;" Gilbert and Grawitz, on "The Causes of Chlorosis;" Leyden, of Berlin, on "The Contemporaneous Methods of Treating Tuberculosis;" Klifosorski, on "The Inertia of the Cell Nuclei."

As an evidence of the unpopularity of the English we may cite Sir William McCormick, who made the closing address at the last general meeting in the French language.

The next Congress is to be held in Paris in 1900, with Professor Lannelongus as president.

A somewhat unexpected difficulty came in getting out of Russia, passing the police, fulfilling the requirements prescribed by the laws of a despotic government and providing a possible means of egress over the railways.

There were no sleeping cars, except for those who paid a regular fare, whether they had a free transportation or not.

But most congressionalists were glad to leave the frontier at any cost, and eagerly seized on any means of escaping "Siberia."

In estimating the net result of the Congress it may be regarded as fully equal to any of its predecessors.

National and religious prejudices for the first time cropped out in a great scientific body, and finally, when the time arrived for opening the exercises it added greatly to the confusion attendant on the organization and conduct of the vast assembly of practitioners. T. H. M.

OBSTETRICAL SOCIETY OF CINCINNATI.

OFFICIAL REPORT.

Meeting of April 8, 1897.

THE PRESIDENT, C. L. BONIFIELD, M. D., IN THE CHAIR.

E. S. McKEE, M. D., SECRETARY.

DISCUSSION ON THE USE OF THE PESSARY, ETC., IN DISPLACEMENTS.

Dr. George E. Jones—Naturally, as anatomists and surgeons, we look for a more tangible method of correcting the various displacements of the uterus than the many so-called supports—often the contrivances of those who do not appreciate the one great fact that they must be made to fit in accordance with a true anatomical knowledge of the parts. A few, and only a few, of the thousand and one pessaries that are thrown on the market can justly claim recognition from the gynecologist; they may for a time do very well, but as a rule too much has been expected from their use. Ulceration, sometimes of a malignant character, has been the result, and we might just as well say cancer, as cancer has been supposed by several authorities in some instances to be the product of a continuous irritation of a part. It is to be hoped the time will come when, except in rare instances, the pessary will become a thing of the past.

Time and again have directions and experiments been made on the cadaver, and of such a nature that it seems very strange the shortening of the round ligaments was not successfully demonstrated on the living woman until 1881. The idea is not of recent origin. It was first demonstrated in 1840, and reported to the French Academy. It was strongly condemned, and at the same time

the surgeon was complimented for his prudence in not attempting the operation on the living woman.

Dissection proved the feasibility of the operation beyond all cavil to be a success, and why some surgeons, known to be bold unto recklessness, should have permitted the many opportunities to go by without demonstration on the living woman is something of a mystery.

Deneffe made the attempt on the living woman, but failed to find the cord. This master was severely reprimanded for permitting experiments on patients under his care.

Adams taught and demonstrated the operation to his students, but when he made the operation on the living woman failed because of adhesions.

Then Dr. William Alexander has admitted that "the operation was originally devised to get rid of the swarm of patients with uterine displacements that infested the gynecological wards of the Liverpool Workhouse;" had it not been for this fit of desperation, the honor would have fallen on some other surgeon at a later date. It proved one fact, Dr. Alexander was a good, practical anatomist and took advantage of the broad limits that had been given to the profession at large, although it has been stated that he never knew of the several attempts, either by dissection or the operation on the living woman. Dr. Alexander gave minute directions how to make the operation. Several attempted but failed, and because of their failure, like the French Academy, condemned the operation. This called forth a rebuke from Alexander, giving them to understand they were not conversant with their anatomy, hence their failure.

Unfortunately some writers have stated that the operation for shortening the round ligaments is an easy one, neither difficult nor dangerous. I think I am right in saying this is not the case, even to the accomplished anatomist and surgeon. Care, and in some instances great care, and skill are absolutely necessary; it is an operation not to be hurried.

Dr. Kellogg says: "The impression that this operation is both difficult and dangerous is erroneous in both particulars." This might be considered a sweeping declaration were it not that he qualifies it by saying "not difficult when one has made himself familiar with the anatomy of the parts and does his work carefully and with ample patience."

The several works on anatomy say comparatively little on the round ligament. No two authors are alike, and they who have made many operations have come to the conclusion that the round ligament requires more than a passing notice. It has an individuality heretofore unknown; it ranks higher than a common ligament.

"Quain's Anatomy" says: "The round ligaments are two flat, or two round, cord-like bundles of fibres, about four or five inches long, attached to the upper angles of the uterus, one on either side immediately in front of the Fallopian tubes. From this point each ligament proceeds upward, outward and forward to gain the internal ring, and, having passed like the spermatic cord in the male through the inguinal canal, reaches the part of the pubic symphysis where its fibres expand and become united with and lost in the mons veneris."

In making the Alexander operation we have something more than a fibrous ligament to deal with, although classed as a ligament, it is not a true ligament in structure. It is composed of striated muscular fibre, smooth, muscular fibre, areola tissue, artery, veins, nerves and, can I venture to say, lymphatics, and a sheath or covering of peritoneum reaching to the outer ring, and sometimes beyond it. It does not take on the silvery, glistening appearance as seen in true ligament, but often of a grayish color, sometimes fleshy in character. It sympathizes with the several conditions of the uterus, especially during menstruation and pregnancy. The veins of the cord have been known to become enlarged and varicosed, simulating hernia.

It is scarcely necessary to state that the rules for cleanliness would be the same in this operation as in

a laparotomy. Good warm bath with free use of flesh brush; then rinse off with sterilized water. Just before the operation shave the mons veneris, and again bathe with the sponge with a solution of hydrargyri bichloridi, 1 to 4000. It makes no difference whether you stand at the side or between the thighs of the patient; take the position that will give you full control of the field of operation.

Briefly will I give a description of the operation in Dr. Kellogg's own language, which is terse and to the point, as suggested by Dr. Alexander: "Make a short incision, rarely an inch in length, parallel with Poupart's ligament. I have adopted Dr. Alexander's later suggestion in opening the canal at a point above the external ring. Make a short incision, nearly an inch in length, parallel with Poupart's ligament, and at such a point as to enable me to open the canal by division of the inter-columnar fascia at a point above one inch below the internal ring. In dividing the inter-columnar fascia it is necessary to make only a slight puncture with the end of the scalpel. I then make the wound gap with a strabismus hook, and, introducing another hook, draw out the round ligament. The ligament at this point is easily found and enucleated from its investing fascia. I draw out both ligaments as far as possible, and secure in the usual manner with a silver wire and carbolized silk suture. The layers of fascia divided in this operation are carefully approximated by a continuous suture of fine catgut, the skin closed in the same manner and the wound dressed antiseptically."

Dr. Kellogg claims many advantages in this operation over the older methods, viz., "the ligaments are always present, easily secured, sufficiently large, can be drawn down with less risk of breakage of the tissues, seldom necessary to cut off the distal end of ligaments, and immediate union can be secured in any case."

Dr. A. W. Johnstone—I have seen about a dozen cases cured absolutely by the curette alone. They were largely in young girls, where there has been a catarrhal inflammation going on for some time, where the inflammation, the blood stasis and all has so extended to the general pelvis, and the round ligaments and the broad ligaments themselves were so soft, that a full bladder or anything of that kind would cause the uterus to be thrown out of position.

The first case I saw was mistaken for a fibroid, but I found it to be only a displacement of the uterus. The uterus was simply an old pus-pocket that needed cleaning out like any other retention pocket, and there was in addition in this case a peritonitis. To my surprise and great pleasure, within two months after curetting, without a pessary being used, that uterus backed itself around to its normal position. The inflammation was absolutely cured, and the only way I could account for it was that by getting rid of this edema the natural supports of the uterus had shortened up and pulled the uterus into position.

Since then I have been watching cases of curetting, and I have come to look on versions as very largely complications of old cases of metritis. It is true, I know, the unusual Alexander operations have shown that some cases never have the round ligament properly placed. Like the undescended testicle, the end of the round ligament seems to wander up along the inside of the abdominal wall and does not get its proper attachments and does not take up its slack. There may be a few cases of congenital retro-position. And then I have seen a few cases that I am sure were caused by trauma. In one case a young woman was thrown off a horse and, after turning a double somersault, lit on her feet and suffered afterward with retroversion. Another one was a girl who rode a bucking horse and was taken off the horse with a retroversion, and it remained until afterward, when she was curetted. She, by the way, also had a chronic metritis.

I tell you of these cases to give you my ideas of what versions really are. The organ, by chronic inflammation, has gotten its supports weakened, and then by any accident

like these the version may be caused, and if it is thrown back and held there long enough these ligaments will be permanently lengthened. I have looked up the statistics, and I suppose about 20 per cent., not more than that, taking the cases as they come, of these old versions with chronic metritis are cured by the curette and holding the uterus in its proper position for one or two or three years with a pessary. There are a great many others who are made perfectly comfortable as long as the pessary is worn, and who are perfectly satisfied to get along with it. Unless there has been some pelvic inflammation or some firm adhesions on which the uterus rides, I believe the patients could wear a pessary for some time. But you must be very careful. I remember a lady from across the waters who had some version and a French surgeon had placed a pessary, and when she came to me it was a question whether her ovaries should not come out. There was a decided swelling on the right of the uterus, probably of the ovary or tube. I found above the insertion of the uterus, in the posterior part of the vagina, a lump which I took for a fibroid. On inquiry she told me she had had a cyst taken out and this pessary was placed so as to rest around the scar of the cyst. I took the pessary out and let her go for a few weeks. You would be surprised to see how quickly and rapidly all the bogginess about the pelvis disappeared and how quickly and promptly the case got almost well, showing no pessary was required. There was one case in which the pessary did a great deal of harm.

Many of these cases have had bad appendages, and it is all right to curette these cases, but bad practice to put in a pessary, particularly if the pessary will rest on the appendages in any way. So that in that class of cases, where there has been more or less occlusion of the tube or adhesions, or where the fire has already rushed through, the pessary should be kept out. It is only in the class of cases where the uterus comes up freely and there is no ovary or tube that the pessary can possibly rest upon that I would ever advise it to be used. But, unfortunately, quite a number of cases will have complications, while if the pessary had been used at the right time these might have been avoided, but it has gone beyond that until the patient has had pelvis attacks which have glued everything together. What is to be done there depends on the circumstances, financially, of the patient and the amount of trouble given. Take, for instance, a wealthy woman with adhesions and a retroversion with a chronic metritis—I have several on my hands now—you curette the uterus and get rid of the original source of trouble; even though there are adhesions there those ladies will be able to attend to the social duties and take long trips to Europe, and here and there and everywhere. They will have attacks now and then, but most of them you will find refuse any kind of operative procedure. And you must remember that this thing of breaking up the adhesions, while it looks very pretty on paper, still it is about the same as the operation for taking out the appendages, and unless it is a threat to the woman's life or to her usefulness as a citizen, I think we had better let well enough alone. Where the uterus is easily put up, I put in a pessary. Where the adhesions are not very great and do not give much pain, if the patient is up and about and able to go back to her position as a citizen and all that, I think we are wrong to urge an operation; but if there has been an accumulation in the tubes or the ovaries, or if the adhesions give a great deal of pain, then it is time to think of operation for correcting the position of the uterus. But in that class of cases I think we operate more for the appendages than we do for the uterus itself.

Now for the mechanical means of fixing the uterus. The one that has appealed to me, and the one I like best of all, is the Alexander operation. It is simply carrying out nature's method, assisting nature by shortening her natural support. I am glad to say I saw the first case I ever did two weeks ago. It was done three years ago. The woman

is very comfortable, has gained in weight, and the uterus is in its proper position. The girl in that case was very uncomfortable before the operation, and it has proven, to my judgment, that it is the one of all others I would want to do. As for the fixation of the uterus to the abdominal wall, I did not hear the previous discussion, and of course will have to go on what my studies have been. I have nothing for this but condemnation; I never liked it, and I see the more experience the world in general is having with it the less they are having to do with it. Like every other fad, it has run its course and is dying out.

Now, as for the method of doing the Alexander operation. This operation is not a hard one, but comparatively easy. Particularly I like the idea of opening the lower end of the canal itself. Even though there was in that case a large sheath of peritoneum pulled down, still it is, compared with laparotomy, mere child's play. I don't know but Martin's idea of taking both and tying them under the skin is about as sensible as any. Then you do not leave buried ligatures and run less danger of sepsis.

As for vaginal fixation, I do not like it, and if pregnancy goes on we may have disastrous results. There is another way of shortening the round ligaments, spoken of by Polk, of New York, which has struck me as reasonable because it gives an opportunity for breaking up the adhesions, which the Alexander operation does not. That is to go down between the uterus and the bladder and stitch the round ligaments together. In the two cases in which this was done the operator attempted to bring the uterus forward and fasten it. Whether it was an irritating catgut ligature or what I do not know, but I know I had to make her many visits for a boggy, thick, hard, indurated swelling that seemed to be general. It left the whole pelvic condition worse than he found it, and if the patient had not been at or past the change of life we would have had considerable trouble, for there surely would have been an abscess.

So, as I find it in my private work, having no hospital appointment and not seeing the laboring classes so much, my experience is that these operative fixations of the uterus are comparatively rarely needed. It is not often they are required. In the working classes you do need them a good deal, probably, but in my experience it is rare you have to operate for malposition, and that you can correct it in a much simpler way than by doing any of these operations, unless it be the Alexander operation, which is a comparatively easy affair. But when we do a laparotomy we may fasten the uterus forward, and the way that is best done, I believe, is just to get in behind the round ligament and double it up in a knuckle and leave it there. But that does not act in all cases. But the shrinkage of the fibres is often satisfactory.

Dr. W. H. Wenning—I spoke at some length last evening on the subject of pessaries, but it occurred to me while Dr. Johnstone was speaking that in some cases of acute retroversion particular attention must be paid to the immediate case of retroversion in the form of establishing a correct condition. Most of the cases we meet, of course, have existed for a long time, but there is such a thing as acute displacement of the uterus. A young lady in one of the suburbs, whilst romping, fell over a chair and hurt her side. She screamed with pain. The first thing the physician did was to give her a hypodermic injection of morphine, which relieved her over night. The next morning the pain returned and he made another hypodermic injection, and so on for weeks and weeks. The patient became worse and worse and became thoroughly debilitated and a morphine debauche. They finally brought her to St. Mary's Hospital, thinking if she did not get well she might as well die there as anywhere else. I found, on examination, the uterus was retroverted, the fundus dipping almost down to the sacrum and firmly adherent. I began the treatment by massage and daily introduction of tampons in a Sims, or knee-elbow position, and

finally succeeded in righting the position of the uterus. The patient expressed relief at once from that time on. But the hardest thing to get rid of was the morphine habit. The body was covered from head to foot with sores, probably due to the use of a dirty needle. She told me when one particular portion of the body was peppered as much as possible another would be used. After a few months, when she got over the morphine habit, she so improved that her friends hardly knew her. This case impressed me that in every case, no matter how young, an examination ought to be made.

Dr. Rufus B. Hall—I was very much interested in the remarks of Dr. Johnstone and the sanguine manner in which he says he cures 20 per cent. of these old chronic cases by curettage. That is about 19.9 per cent. more than I have ever been able to cure.

Dr. Johnstone—Evidently the gentleman was not listening. I said most of them were in young girls; they could not be very chronic.

Dr. Hall—I stand corrected, but I understood the doctor to say in young girls of long standing. I will grant we have better results in young girls, but in the old chronic cases I have not had very satisfactory results in curing them with the curette.

Vaginal fixation for retroversion I discussed at the last meeting, and I will not refer to it here. But I will refer to Dr. Jones' paper. I believe the Alexander operation has had its best days. I believe, as expressed by one of the speakers tonight, we have fads in the profession, not only in medicine, but in surgery, and I believe the fad of the Alexander operation is passing. It does relieve the retroversion. It is an ideal operation in many respects, but in very many instances the patient is worse off with a retroversion cured with a pair of hernias than she was before, and this cannot be gainsaid by anybody. Even Edebohls will have his hernia all right, and so will anybody who opens up these canals, especially in fleshy subjects. I have gotten tired of jumping out of the frying pan into the fire. It is very unpleasant to operate on a retroversion and have the patient come back to have the hernia cured, and then return the next year to have the hernia cured again. I believe we are asked for relief by the working class because they are obliged to be on their feet and need relief more, while the society person may be made more bearable without operation. But occasionally even wealthy people will ask for relief from great pain. Some people suffer much more than others from a retroverted uterus. Why this is true it is difficult to explain.

Dr. Giles S. Mitchell—I will not take up any of the time of the society, for at the last meeting I spoke on the question.

I am surprised that the speaker of the evening has had such a large experience with retroversion in young girls. Nearly all the retroversions that have come under my observation occurred in multiparae, women who have borne children, women who have had cervical tears and perineal lacerations. Of course, I can appreciate how cases can occur in virgins from great violence, such as has been related by the speaker. But it seems to me this malposition is comparatively rare in virgins. I can also readily appreciate the value of curettage, but not to the extent of curing an ordinary retroversion. Of course this is part of the treatment.

Now, as to the Alexander operation. I simply want to emphasize what I said at the last meeting. I am quite sure this is the ideal operation; this is the operation which is most feasible, sensible and scientific, and this is the operation which will last. I am astonished at the gentleman who said this operation is passing away. The Kelly operation has been found fault with of late, and it is an operation which will be done less and less, and for good reasons. And the Mackenroth operation, also, I am quite sure will be done much less frequently by the gentleman the next year. If we are to take the statements of such men as Kellogg and Edebohls, who have had very few cases of hernia, when a man operates a thousand times and has very few hernias it seems to me the

danger from this source is comparatively slight. There is no question Kellogg is a credible witness. Edebohls quotes him in his recent article, and gentlemen have gone there to see him, and I have no doubt his statements are correct. If the operation is done after the method of Kellogg, as quoted by Dr. Jones, or after the method of Edebohls, or any of the approved plans, hernia ought to occur very seldom. It seems to me, from the statements I have read, the greatest danger is from rupture of the round ligament itself. Of course, no man would think of trying to repose the uterus where there were numerous adhesions until the adhesions were gotten rid of, and they are gotten rid of by a long plan of treatment, such as vaginal suppositories of glycerine. And I am very sure the Alexander operation is the one we will all be championing in the next 15 or 20 years.

Dr. C. L. Bonifield—I, like most of the other gentlemen, spoke on this subject at the last meeting. I now merely want to refer to one or two things. My experience is not like that of Dr. Johnstone's in regard to breaking the adhesions. If a case comes to me with a uterus retroflexed or retroverted (they are usually retroflexed), if the adhesions are very extensive and under an anesthetic I cannot discover any disease, I do not hesitate to break up the adhesions by the Schultz method. The fact the doctor speaks of is undoubtedly true, that hospital cases, cases of working girls, etc., are those that most imperatively demand operative procedure, just as a man doing light work may get along with a truss, but a street laborer has a pretty hard time, so a person in moderate circumstances may get along with a pessary, but the girl who works, as with a sewing machine, must have the condition relieved. I thoroughly agree with Dr. Johnstone in curetting these cases. I am not prepared to say whether it is 20 per cent. or more that I have cured with the curette and other means. The use of the curette is the first step and one of the most important ones.

Dr. Edwin Ricketts—In regard to the use of pessaries, I do not want to go over that ground; you know my views. As to the operation of Alexander, the men abroad, who are associated with him, are the ones to throw this operation down. The leading men doing gynecological work, who knew of the Alexander operation when it first came forward, are the ones that say, as has been said here to-night, that it is not the operation to be preferred, except in a very few cases. And as to the gentleman on the left making the assertion that the operation of Vineberg is being relegated to the past, I beg to differ from him. I would beg to ask the gentleman if he has ever seen the operation done.

Dr. Mitchell—I never have.

Dr. Ricketts—Then I do not think that is a fair criticism to make. The cases I have seen operated upon, while it is as yet too soon to pass final judgment, I want to say that they are simply superb in character. I don't care who may denounce it, I have myself seen very good results of the work. We know the retroflexions give us the greatest trouble and we all know foreign bodies in any part of the body can give a great deal of trouble, and, as stated by Dr. Jones, a pessary can be the cause even of cancer. And in the operation of Vineberg you do not have the danger of hernia as you do even in the operation of Alexander itself.

Dr. Mitchell—The reason I have not felt that the operation would stand is because of the various criticisms made. The men who have followed the operation have abandoned it. It seems to me the operation should be abandoned.

Dr. Hall—I would remind the gentleman that the cases he refers to are not those made by the Vineberg operation at all, but those in which the uterus was stitched to the vaginal wall, and not fixed by the round ligaments, as in the Vineberg operation.

Dr. Johnstone—I am a little surprised to learn from some of the speakers that they do not see any retroversions in young girls. I think I see almost as many in them as in others. I have two on hand now, one aged 16 years and the other 22.

You have no idea how common this is unless you happen to have a run of those girls. The finding of a retroversion in that class of cases, I believe, is the saving of a life-long trouble, because you can cure that class of cases much more easily than you can in the multiparae.

As for the vaginal fixation, I would like to ask if any of the gentlemen have had a sort of cellulitis after the operation, a persistence of the inflammation around the scar, that comes and goes with each little attack of cold and makes the whole vagina hard. I want to know if that is an unique experience.

Dr. Hall—I have not had any like experience; it is a new case to me.

Dr. Johnstone—I would like to just detail a case I had once. It appeared as if it would be a hard case, but to my surprise I found not a single adhesion, but the broad ligaments were shortened up in a peculiar way. In those days I was, perhaps, more daring than I am now, and I pulled the uterus up and found it to fall backwards. And I have often thought when you get hold of a uterus you cannot tell whether it is fixed to the vagina or not; these appendages may twist the uterus back and hold it there, so it is a deceptive condition.

Dr. Bonifield—In regard to the adhesions, that is very true. Oftentimes the uterus is sharply retroflexed, but in those cases, if one is sufficiently skillful, if he will carry two fingers in the vagina, even with the patient on the back, if the abdomen is tolerably lax, he can throw the uterus back, or possibly it may be necessary to turn the patient on the back, but it requires considerable force. The adhesions I speak of you can feel, and you can feel them give way. You cannot put the uterus in position until you have pulled it down with a vulsellum and done away with the adhesions, and then you can replace the uterus. In those cases, of course, you cannot always tell whether the apendages are diseased or not, and if I had any doubt I certainly would not resort to this method. When we fix the uterus forward we simply substitute one pathological condition for another, and it certainly will require one or two years before we can determine the value of the procedure.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

MODERN FRACTURE TREATMENT.

Quackery thrives, grows and, in spite of our boasted scientific progress from year to year becomes more deeply rooted in the public confidence, and not alone among the rag-tag of the alley, either, but the most prominent and cultivated classes of society as well.

A missionary from China lately informed the writer that among all classes in the Chinese empire, foreign as well as native, there was no physician in greater demand than the Mandarin in the treatment of typhoid fever, who employed nothing in any case except occipuncture, as his recoveries were the promptest and his mortalities the least.

How well we remember in our student days the earnest, emphatic admonition of our teacher in surgery that we must treat a fracture on certain definite "principles." The shatous.

In France and Germany now the usual course is, for fractures of the lower extremity, to apply a mechanical adjustment, easy of removal, and put the patient on terra firma at once, or no later than 24 hours, and apply friction over the fragments and move the joints daily.

There can be no doubt but in many fractures of the limbs attended with slight or no deformity it would be better if little or no dressings of any kind were employed, if the patient were put on crutches and joint motion commenced early.

But the practice of applying this plan to all fractures is certainly a great mistake. The trouble will come in adopting it in private practice, for it should always be remembered

tered bone "must be placed at rest and immobilized." But now, in a few years, before the frosts of time have yet bleached our hair, these "principles" are being denounced and repudiated as false and dangerthat in fracture treatment that that which may be permitted in hospitals must often be modified outside, and the evil comes through the average reader taking for granted as orthodox plans of treatment often based quite entirely on hospital experience.

In all but exceptional cases the safest and most effective course will be the intermediate, viz., wait until the sanguinous extravasation has been resected,inflammatory exudates have disappeared and a provisional callus is formed before we insist on locomotion or vigorous joint action and liberation of the muscles.

The exceptional cases, in which it is often imperative to put our patient in the upright attitude, with the limb pendulous, are in cases of retarded union or in fleshy, heavy subjects, suffering from femoral fracture, in whom protracted confinement to bed is attended with danger to life.

The fact is, there are no immutable principles governing fracture therapy, but every case must be managed on such a rational plan as is required by each individual case.

Thus we stand "between the devil and the deep sea," liable to malpractice suits if we move our patient out early, and quite certain of being mulcted if a deformity ensues through ignoring "principles."

HONORING THE MEMORY OF A NOTED PHYSICIAN.

It is indeed a source of gratification to learn of the magnificent tribute which the city of Rahway, New Jersey, has recently paid to the memory of the late Dr. John J. Daily, who was born, bred and who passed his last hours in that quaint old city.

Some few there are in the ranks of the profession who attain to wealth and fame, but it rarely falls to the lot of any member of our craft to enjoy the love and confidence of all citizens in life and be generously and gratefully remembered after death, as was Dr. Daily.

Dr. Daily was a student of the well-known Abernethy, distinguished in his time as a surgeon of advanced rank throughout the State. It was therefore to be expected that Daly would incline to that branch of the healing art, which he pursued with singular success, performing with rare skill many of the most difficult operations in surgery.

Dr. Daily was actively identified with the municipal affairs of Rahway and occupied all the positions of trust in the gift of his fellow-citizens, from member of the Council to Mayor of the city, which position he held at the time of his death. Though having a very large practice among all classes the doctor accumulated but little, as he was an indifferent collector and never refused a call in the absence of a fee.

After the doctor's death a subscription was opened in Rahway with a view to raising a monument over the resting place of the beloved physician. In a very short time the sum of $2300 was collected and on April 17, 1897, just one year after his death, the monument was unveiled.

This superb granite shaft is unquestionably the most substantial, artistic and enduring tribute ever raised by the voluntary contributions of a physician's patients and

friends. It certainly has no counterpart in America, and well and worthily has it been bestowed, for Dr. Daily was one of nature's noblemen. Honest, fearless and generous, he had no enemies among his professional associates. As a practitioner, scrupulous, diligent and painstaking, his sympathies and his money were ever ready when the necessities of the poor or unfortunate appealed to him.

The action of the citizens of Rahway amply testifies to his lofty character and noble traits, dying in the prime of life—under 45 years of age—and yet eternally endeared to all who knew him.

It was the good fortune of the writer to be numbered among his friends, and a more superb example of the ideal physician he never knew; a man of lofty principles, enthusiastically devoted to his chosen profession, of the real old stock, who would cheerfully sacrifice life rather than barter away honor; one, indeed, too good, too pure and kind-hearted for the duplicity, corruption and evil of the world, and who, let us hope, is now reaping the reward of a life well spent.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.

Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

ROENTGEN RAY SKIAGRAPHY.

BY DE FOREST WILLARD, M. D.,

Philadelphia, Pa.

Professor Goodspeed has very properly emphasized the importance of the study of normal living anatomic delineations. Even surgeons are not familiar with the appearance of the living skeleton in situ, and for accurate comparison we assuredly require a series of skiagraphic normals.

I was in my first efforts greatly puzzled in the interpretation of conditions either plainly or indistinctly seen in the skiagraph, and even after considerable experience am obliged to study with great care each representation in order to differentiate the abnormal from the normal conditions.

Although skiagraphy is a most valuable assistant to the surgeon, yet a word of caution is necessary. It has been most conclusively shown that the position of the tube, the direction of the rays, the method and time of exposure, the magnification of portions of an object not in contact with the plate, the elongation of shadows from distant portions of an object, together with other varied conditions, may so completely distort the resultant image that error is certainly possible. A fracture may appear to exist when a bone has not been broken, and on the other hand it has been shown that a known fracture produced by osteotomy is not discoverable. These facts make it imperative that the medico-legal value of these radiographs should be considered carefully, and

pictorial evidence should receive only its due amount of consideration in connection with clinical evidence. Clinical evidence should have, and does have, large weight in the question as to results after fracture or other injury. Knowledge obtained by long experience and positive indications is far more valuable than any representation visible alone to the eye. A familiar example of this is seen in photography, an art which has obtained through many years a stage of great perfection, and yet representations taken by the same artist upon the same day of the same individual will yield results almost absolutely dissimilar; therefore, in suits for malpractice, while these skiagraphs may be useful, a single view is not indisputable evidence. The alleged deformity should be shown from a number of different points of observation and comparison should be made with normal anatomic conditions. Recent callus is translucent to the rays and may appear falsely as a non-union. Not only should the skiagraph be absolutely identified, but all of the well-established rules of evidence should be rigidly followed.

Again, a simple deformity which does not interfere with function may not be of serious importance, and we have no right in the present state of our knowledge to compel a surgeon to secure results which were very probably unattainable under the conditions resulting from the particular form of injury or from environment. Valuable as skiagraphy is as an assistant to a surgeon, it is still a young science and its indications must be carefully and thoroughly considered in connection with clinical symtoms. A skiagraph is but one of a number of elements which will greatly assist a surgeon in arriving at a proper diagnosis and in the determination of the treatment to be employed.

FRACTURES AND DISLOCATIONS.

The importance of skiagraphy, particularly in fractures near the joints, is well illustrated by representations (shown on screen) which exhibit the difficulties in reduction and in retention of fragments.

For demonstrating fractures in the upper extremities the process is especially useful, and in hospitals where the patient can be taken to the scotoscopic room, the lower limb can also be readily skiaghaphed. Doubtless an apparatus capable of transportation will soon be devised.

The progress of union in fractures can be steadily watched, as the rays readily penetrate bandages, silicate of soda and even plaster of paris, although the latter contains lime. In non-union and in mal-union most valuable information can be elicited. In suspected dislocations where the local injury is great and the swelling considerable the advantages of this process are self-evident, and the necessity or non-necessity of operative interference is demonstrable.

In the present state of our knowledge, and with our well-established clinical facilities for diagnosis, the securing of such delineation, while very desirable, should not be considered an essential procedure, although frequently of great advantage.

In the difficulties surrounding injuries about the elbow-joint the assistance of anesthetics and the use of the rays will greatly simplify the problem.

The delineations of the thicker portions of the body are still only moderately clear, yet even fractures and dislocations of the vertebral bones, pelvis, etc., are recognizable.

In the skull the opportunities for misrepresentation are greater, but the difficulties will in time be overcome and the deadly and often undiscoverable fracture at the base may yet be made plain to our vision.

FOREIGN BODIES.

The detection of foreign bodies in the tissues is frequently a work of ease. Their location and depth are obtainable by pictures taken at different angles or by the device of comparative definition, such as has been shown by Professor Goodspeed.

The locating of needles is still a problem (even though they are plainly visible in a skiagraph) since they are perfectly capable of being transferred from one position to another after the taking of the picture, and

their habit of concealing themselves within the sheath of the tendons or of sliding in the tissues is well known. Many surgeons have missed a needle when it has been present in the direct area of operation. By taking views from different angles the relation to hard and soft parts can be determined with decided accuracy. Scott has proposed to take two pictures on different parts of the same plate; one end of the plate being covered with sheet lead while the other end is subjcted to the rays; after which a second picture is taken on the other end of the sensitive plate without moving plate or tube. The varying angles of the object can thus be clinically determined or can be geometrically figured with accuracy (American X-Ray Journal, Vol. 1, No. 2, June, 1897, p. 41).

Two or three pictures taken at different angles by tubes connected in series, will also give mathematical triangles for exact information.

Foreign bodies in the brain, esophagus and thoracic or abdominal cavities can often be thoroughly outlined, and by a series of rays even their depth may be located. With the fluoroscope, also, a surgeon may, during operation, especially in the esophagus, stomach . or bronchi, bring to his help the immediate use of the rays and view and guide his instruments during manipulation.

A discouraging fact in the delineation of foreign bodies in the abdomen has been shown by Professor Goodspead in the case of the so-called "man ostrich," who had swallowed a large number of metal articles, belts, knives, etc., just previous to the application of the X-rays, yet only a darkened area was visible, without any definite outline of the articles.

Drainage tubes lost in the thoracic cavity are sometimes non-demonstrable, but after skilled adaptation of time of exposure are visible.

The placing of lead or other reference marks upon the surface to fix the location during skiagraphy is often of advantage in ascertaining distance from the surface. The process is also useful in locating the position of a collapsed lung in empyema and after thoracotomy, and the rapidity of expansion is not only interesting, but an important addition to our knowledge.

BONE DISEASE.

The importance of the process in locating bone abscess, periosteal thickening, osseous growths, exostoses, etc., is undoubted and much information can be obtained, not only in regard to the shape, attachment, position, etc., but the question of treatment may be materially influenced.

JOINT DISEASE.

In joint disease, not only of minor articulations, but in the larger joints, as the hip and knee, most important results are obtainable. Joint erosion of cartilage, destruction of the bone, etc., are as nearly visible to the eye as if the joint itself had been opened by the knife, and the question of excision, erasion, amputation or non-interference may be facilitated. Whether a joint should be allowed to remain anchylosed, or whether it will be safe to attempt restoration of motion can be very accurately decided by this process, as I have previously exhibited (Trans. Amer. Surg. Asso., 1896).

In hip diseases the non-existence of the head and neck of the bone, and the position and condition of the upper extremity of the femur can be readily determined. Old dislocations and fractures of the neck of the femur can be also shown with advantage.

In caries of the vertebra not only can the diseased area be located, but the outlines of the resulting abscess can be determined by withdrawing the pus and filling the cavity with iodoform emulsion, which will outline the thickened and darkened sides of the abscess cavity. In hip abscesses the same maneuver can be practiced.

In anchylosis of the shoulder great assistance can be gained by the simple representation. Osseous projections, nodules, callosites, etc., interfering with the restoration of the joint motion are readily shown. The process is also helpful in periostitis,

in bone thickening and in demonstrating the cause of metatarsalgia. Epiphyseal separation can also be differentiated from dislocation.

In knock-knee, bow-legs, deficiencies of bone, irregularity of condyle growths, etc., the use of the process is invaluable.

In talipes the shape of the tarsal bones may be outlined and the form of operation decided upon (Williard, Trans. Amer. Ortho. Assoc., 1896).

In the foot, deviations of all kinds from the normal standard are demonstrable with the greatest ease and accuracy, and the same may be said of the hand.

GALL AND BLADDER STONES.

Gall-stones, renal calculi, enteroliths, etc., while decidedly opaque to the X-rays are frequently not discoverable when in situ. Their detection will largely depend on the skill of the operator and his technique. We have many other things yet to learn in regard to outlining these abnormal bodies, but a few months will probably bring extended knowledge. The difficulties in the case of gall-stones are due to the fact that when surrounded by the medium of bile they are obscured. In renal calculi also close relation of the vertebral bodies and ribs may conceal the concretion. The different varieties of concretions require special care as to the time of exposure, etc. In the bladder the bones of the pelvis also obstruct the view, but by passing the rays in the direction of the axis of the pelvis this difficulty may be overcome, as has already been shown in several instances.

It is scarcely necessary for me to speak of the advantages of this process in regard to the more strictly medical conditions, such as aneurism, dislocation of the stomach, the condition of the viscera, subdiaphragmatic abscess, etc., or of its use in ophthalmology. Its employment is steadily advancing in importance.

—Journal of American Medical Asso.

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Clinical Medicine.

In charge of Dr. J. J. Morrissey.

SOME PRACTICAL OBSERVATIONS ON PULMONARY TUBERCULOSIS.

J. J. MORRISSEY, A. M., M. D.,

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The splendid results which have accrued within the past few years in the prevention of diseases chiefly depend upon the advances made in bacteriology. These advances, to a great extent, have not only revolutionized our ideas as to the propagation of many diseases whose pathological relations were in past years a terra incognita, but, more than that, they have demonstrated the proper remedies to be used in overcoming their ravages, and therefore this progress in bacteriological research has proven itself to be one of the most essentially conservative factors in prolonging the human race.

If we accurately understand the causes of disease, scientific knowledge and deduction will in time invariably point out the means of eradication. To-day, more than ever, medicine is being reduced to the safe principles of a permanently scientific basis; to-day the physician is performing the highest function of his profession, not so much in striving with all the means which an enlightened scientific spirit has placed within his power to combat with and overcome disease, but, what is of higher value in the scale of humanity, to do his utmost to prevent its encroachment.

It is in the latter phase of his labors that the true physician demonstrates the nobility of his excellence

as a friend of mankind, for there is no other calling which destroys the ratio existing between the laborer and his wages as does the physician.

It stands as a matter of course that the greater the amount of sickness the greater the draught upon the patient's financial resources, to the consequent enrichment of the physician, but, undaunted by any sacrifices of that character, it is the proudest boast of the medical man—using the term in its broadest acceptation—that his best work is ever devoted toward preventing disease.

In this department of his self-sacrificing avocation there is one disease in particular which has commanded an unusual amount of attention, namely tuberculosis, or what is commonly termed consumption. When tuberculosis is mentioned it generally signifies that form of the disease which affects the lungs, though it must not be overlooked that the essential unity of the process is the same whether its battlefield is the lungs, the brain, the liver, the kidneys, or the intestines. The morphological characters and pathogenetic revelations of the bacillus tuberculosis are identical no matter what portion of anatomical territory it may invade. But when we speak of tuberculosis without restriction we mean an affection of the pulmonary tissue.

There appears to be no disease with which the public seems to be so thoroughly acquainted as with tuberculosis, and it is right that this ravager of the human race should maintain the conspicuous position it occupies in the medical world, for there is no disease which numbers among its victims so many to whom life, with all its youthful delights, is just opening. Young women, budding forth into womanhood, and the youth before whom life with its aspirations appears like a field of variegated flowers, full of beauty, color and fragrance—these are among its victims; not but that it also includes in its victorious conquests the aged and decrepit, but the form of the disease from which they suffer is mainly chronic and degenerative in character, and does not possess the acuteness and virulency of that type which assails the young. There is no strata of society, no condition of life which appears peculiarly exempt, and many a post-mortem discloses a circumscribed tubercular infiltration whose presence during life was not suspected.

Is tuberculosis inherited? Scientific investigation has answered the interrogation in the negative, but that intangible something which we call predisposition is transmitted. "Latent susceptibility," "concealed diathesis" and other vague phrases are frequently used where scientific nomenclature has not given us more accurate terminology. However, there can be no question that in many lungs the bacillus tuberculosis finds a more favorable locality for multiplying than in others. Whether this be due to some peculiarity of structural formation or an inherent weakness it is difficult to affirm. The fact remains that this peculiar, infinitesimal organism rapidly influences, by the production of its toxins, the tissues of many individuals who are apparently in the most vigorous condition of health. This "latent susceptibility" is an unknown factor and therefore has not as yet been estimated at its true value. Hereditary predisposition, as Hirsch puts it, exercises its influence through a "congenital disposition toward the disease, a disposition that has to be looked for naturally in the organization of the respiratory system."

The bacillus tuberculosis may be introduced into the human system in various ways, but for practical purposes we may say that "tuberculosis in man is caused by infection (1) through the excretions or discharges from infected animals, including man himself, or (2) the milk of infected animals, including his own species, or (3) the flesh of infected animals.

Statistics prove that it is the pulmonary form of the disease which carries off the greater number of victims of tuberculous infection. Of all the deaths due to the disease, three-fourths are caused by the pulmonary form. The communicability of consumption depends upon the bacillus. It is not communicated by the breath of the affected, nor by

the liquid sputa, no matter how thickly it may swarm with the minnute organisms, but when the expectoration dries and fills the atmosphere with a microscopically infected dust, then it becomes more dangerous than an armed foe. It may not only be breathed in with the air and find a favorable repository in the pulmonary tract, but it may also be deposited in food, or on the surface of milk, and in the alimentary system propagate its poisonous secretions.

There are many persons in whose mouths and throats the bacilli may be found, and yet they are in a perfectly healthy condition. In fact, in every large city it would be impossible to entirely eliminate the bacilli, no matter how perfect the sanitary environment might be, since there are so many ambulant cases of the disease. The absence of a pathological lesion in the lungs of the healthy preclude the possibility of infection. But even here the field of bacillary activity has been greatly lessened, as sanitation has placed certain restrictions upon the great American habit of indiscriminate expectoration, which no doubt has not only exercised a soothing influence upon the nerves of sensitive people, but, what is of more practical value, has also had a marked effect in lessening the spread of the disease.

We have touched in a former paper upon the necessity of establishing sanatoria in the neighborhood of large cities, where consumptives could be properly treated without the trouble and oftentimes great inconvenience, mental suffering, physical prostration and expense of a frequently futile journey to the West and South. What we said then was mainly applicable to advanced cases. But as important as these considerations are how much more so when applied to incipient tuberculosis, when, if ever, the disease can be throttled at its very outset. Our treatment of the first stage of consumption among the poor at the present time is well-nigh barbarous.

We may delay the final outcome by the use of diet and medication, but the patient goes rapidly downward, as his environment remains the same. When the disease has progressed for months, and oftentimes years, we permit them to enter our hospitals and we do what we are able to make their condition comfortable, realizing that death is inevitable and not to be postponed.

How much better it would be, and more in consonance with the judiciously directed philanthropic efforts of our day,if an institution was erected entirely devoted to the management of consumption in its initial and curative stage. It would embrace the very class of people who are not sick enough to be admitted to our general hospitals, nor well enough to pursue their daily labor, which they often do until nature rebels. As an economical problem of considerable financial valuation it would seem to be worthy of municipal attention. There could be applied the latest scientific discoveries with every hope of absolute cure, for climate in itself does not now hold the prominent position it once occupied in the estimation of physicians, and moreover it seems the very apotheosis of cruelty to send a doomed man thousands of miles to find death at the end of his journey, as was often done in the past before we realized the resources of the Empire State. It is on the recognition and appropriate treatment of the first stages of phthisis that thousands of valuable lives depend. We build hospitals for other special diseases, but in the whole range of philanthropic activity there is no demand that should meet with a quicker response than the erection of an institution where tuberculosis in its first stage could be cured.

At repeated intervals we see quotations in our journals, generally copied from foreign publications, of the use of an ancient remedy in a supposedly new form. Just now it happens to be quinine used in the

shape of a suppository in the various diseases in which the drug is administered. An English practitioner wrote to one of the leading English journals as to the great success he had achieved in overcoming the tinnitus aumium, nausea and other sequalea which usually accompany the administration of fairly large doses of quinine per orem. The secret of his success was the use of quinine in rectal supositories. We venture to say that there are hundreds of physicians in the United States who make use of the same method in the daily administration of quinine, and particularly in the case of children. The writer has done this for years, but never thought it worth while to mention the fact, and yet every other exchange we come across thinks the fact worth noting, and another compliment is paid to the inventive genius of our English confreres.

In another publication we saw an extensive account of the treatment of pneumonia by cold applications, and due credit was given to a German physician of some eminence in Berlin.

In the columns of the "Times and Register" the past winter and spring we have again and again dwelt upon the utility of this method and cited cases to prove the stability of our position, while here in New York Baruch has frequently spoken of its efficacy.

We are too prone to look to foreign countries for light to guide us in the dark ways of disease, but upon investigation we oftentimes discover that it is only a deflected light cast by the rays which originate upon this side of the world. Numerous instances might be cited in support of the above assertions, and it is time to pause and give credit where it is due. In the fields of bacteriological research we confess to the superiority, and that only in a very limited direction, of the Germans; but in the field of clinical medicine —a field that is growing richer and more luxuriant year after year—our powers of observation are as keen and as clearly developed as can be found among the advanced physicians of continental Europe. The same may be said of surgery. The operations performed in this and other metropolitan centres are as skilfully executed as in any of the great clinics of Europe. And the American surgeon is beginning to recognize that it is not so much in boldness in executing, as conservatism in saving, that the domain of the future surgeon lies.

Let us be more careful, then, to give what is new, and above all things what is practical, and not insert in our medical publications antiquated ideas, simply because they bear a foreign stamp.

The marvelous development that has taken place in the studies and observations of disease in the past 50 years has met with a thorough recognition and appreciation on the part of English physicians in the general review of the arts and sciences and literature that has been devoted to their consideration during the Victorian era. It is simply wonderful to contemplate the successive stages that have led up to the perfection of surgery and medicine, in their different ramifications, that we to-day enjoy. Rescued from the sway of empiricism and placed upon a scientific basis, unassailable in its principles, the practice of medicine has made gigantic strides. And while the human system in its powers and potentialities will ever remain the same, yet there are modifications ever taking place within its boundaries, the direct result of individual peculiarities, coupled with the subtle powers engendered by heredity and environment.

In the past the identity of the individual was lost in the consideration of the disease; to-day, with the more enlightened views that prevail as to the causative factors which lie at the very foundation of disease, as well as the intimate relationship existing between mind and body, it is the patient who engrosses our attention.

We have reduced the loose methods of other days, particularly in the administration of therapeutic remedies, to the accuracy of a scientific basis, and with the perfection which has been acquired in the medical art is coupled a more enlightened view

of the individual, his peculiarities, his susceptibility, his environment, and lastly a keener appreciation of that intangible power which we call heredity. Now we depend more upon fortifying the system against the rapid encroachment of disease by proper nourishment, by sustaining the powers of nature, than upon the use of drugs. The latter have their defined limitations, and he is the best physician who understands their proper application.

The art of diagnosis, too, has rapidly advanced to the front, commensurate with the progress that has been made in other directions. The combination of qualities necessarily required for perfection in diagnosis is a talent not possessed by every physician, but we should all strive to attain exact methods in reasoning, accuracy in our modes of examination, and base our results upon scientific deductions, rather than on crude empiricism.

Bacteriological researches have cast a flood of light upon the field of clinical observation, but the true physician should ever remember that after all it is the restoration of the patient's powers wherein medicine finds its true application. Many a theoretical seeker after the germs of disease cannot make an accurate diagnosis at the bedside, and on the other hand many a clinician is unable to distinguish between the gonococcus and the bacillus tuberculosis, but the combination of the bacteriologist and the physician in the same individual produces the happiest effects.

Current Medical Literature.

OPEN YOUR EYES AND STUDY THE CIRCULATION!

Slowly, by degrees, the profession are awakening to the all-important fact that there is but one central idea in medical practice, and that is the circulation of the blood. By this single process has all growth been accomplished, and by this same process must all repairs be made. Consequently, remedial measures are valuable only as they act upon the circulation, either locally or generally. Just in proportion as this conception has secured recognition, to a corresponding degree has the profession been liberalized, so that it now contains large numbers of ardent truth-seekers, who are earnestly making the acquaintance of every available means by which the blood-stream can be fluctuated and controlled. Prejudice is melting away, hostilities to innovations are becoming enfeebled, all hindrances to progress are being torn down, the tyranny of ignorance and conceit is being rapidly overcome, medical monopolies are passing away, and never before in its history has there been such a wholesome and widespread awakening and friendliness in the hearts of medical men to every new idea that can demonstrate its ability to flush or pale bodily tissues. Drugs and knives and local applications no longer constitute a complete medical armamentarium. The part which mental and emotional forces play, not only in the functional activity of all bodily organs, but also in pathological formations, is at last being recognized by medical leaders, and also to a considerable extent by the rank and file of the profession, and a knowledge of suggestive therapeutics will soon become a necessary part of a complete medical education. The value of osteopathy as a remedial agent will in due time be recognized, and no doubt many other forces as yet unheralded are to be recognized and secure a recognition as legitimate means of cure in the new book of progressive medicine which the last end of the nineteenth century is rapidly compiling.

—E. H. Pratt, M. D., Jour. Orificial Surgery, Sept., '97.

VIRCHOW ON SPECIALISM.

The Berlin public have not lately had so many opportunities as usual of hearing Prof. Virchow, but at an opening meeting of the Congress for Innere Medizin he was called upon to make a speech. His appearance, as is not unusual, met with enthusiastic applause. He said that from the first moment of his public activity he had set himself against specialties. His friend Traube was the first who gave him pause, and whom he gave in to, but not with full conviction. Then one after another came until they came to the great authorities of the present time, of whom he willingly confessed that they had pretensions to appear something special.

Nevertheless, he still cherished the hope that externally the communion of interests that bound together the different branches of medicine would again come into force. From the separation into the Surgical Congresses, those for Innere Medizin, and Gynecological Congresses, with which another, that for Pathology, would soon be associated, proceeded a distraction, from

which arose the appearance that there were greater differences in fundamental views than was really the case.

The individual directions that were considered specialties, spread abroad their pretensions, and nothing was worse in regard to this than pathological anatomy, which was comprised in all of them. It was sometimes the surgeons, sometimes the physicians, sometimes the gynecologists, who specially busied themselves with it. He could not think that this was very fortunate. The old pathologists would cross themselves if they could rise again.

It had been possible, however, that upon this foundation of the newest and most powerful research an attempt has been made to build up a new humoral pathology that progressed victoriously. But even from the speech of the absent president serum therapeutics were not far enough advanced to form the foundation of the therapeutic work of the future.

He went further, and believed that the fortunate results that had been attained in some directions laughed at all explanation, and that there was no theory, but only a practical knowledge, such as had been reached through Jenner in smallpox, where even to-day we were far away from any scientific explanation. He would not, however, offer any opposition if the Royal Government built further on such hopes, from which it believed it had greater certainty than was actually the case.

Med. Press.

THE PRESYSTOLIC MURMUR.

Kasem-Beck makes a communication upon the diagnostic value of this murmur and upon some symptoms connected with aneurism of the heart. The presystolic murmur has usually been looked upon as diagnostic of mitral stenosis, but in recent times cases have been reported in which such a murmur has been heard during life without this lesion having been found after death. A presystolic murmur has been heard in aortic regurgitation; thus in 16 out of 19 such cases mitral stenosis was not found at the necropsy. In other cases where presystolic and diastolic murmurs have been noted an adhesive pericarditis has been found, and no combined aortic and mitral disease. In Phear's case with similar murmurs there was no pericarditis, but an enlargement of the left ventricle. A presystolic murmur heard at the apex can be produced in aortic disease by the meeting of the two streams of blood coming respectively from the auricle and from the aorta. A presystolic murmur has even been heard by Picot in hysterical cases. Thus the presystolic murmur is not an absolutely reliable sign of mitral stenosis. The author finally records an instance in which a presystolic murmur was heard in a case of dilatation of the mitral orifice. A man aged 63 complained of pains in his arms and dyspnea. A true venous pulse was visible in the thyroid and mammary veins. The powerful apex beat displaced downward and outward was felt in the sixth interspace. The right limit of cardiac dullness extended to the right parasternal line, and the left limit to the mammary line. A presystolic murmur with a muffled first sound was heard at the apex, and the second sound was accentuated. In the tricuspid region the first sound was also muffled, and the second sound was unaccompanied by any murmur. The second pulmonary sound was loud. Arteriosclerosis was present. At the necropsy there was no narrowing of the mitral orifice, but a relative insufficiency of both orifices, the circumference of the left orifice being 130 mm. and of the right 170 mm. Near the apex there was an aneurismal bulging of the size of an apple. There was marked general arteriosclerosis, the vertical branch of the coronary artery being specially involved. The author thinks that the presystolic murmur was due to the ventricular aneurism. In spite of the relative insufficiency of both orifices there was no systolic murmur. The marked raising of the intercostal spaces following the apex beat along with the small radial pulse is a sure sign of aneurism of the heart.

—Centralbl. f. inn. Med., Feb. 13, 1897.

FOREIGN EXCHANGES

Translated by Dr. E. W. Bing.

INCOERCIBLE VOMITING OF PREGNANCY.

A RAPID CURE—GEOFFROY.

By palpation Geoffroy has found that the vomiting is caused by a reflex contraction of the digestive tube, the pylorus and duodenum, but more particularly of the flexure of the colon at the pelvic end. And this is the point at which the method is to be applied. Prolonged palpation or pressure which permits the recognition of the cause also furnishes the cure. Its action is certain and rapid, in one, two or three very short seances the hyperaesthesia is calmed and the contractions cease. The disappearance of these is coincident with the cessation of vomiting, of which they are the cause, and the cure at once takes place. The author cites numerous cases cured.

—La France Med.

Dr. Knapp (Berlin) has found acetone in the urine of pregnant women, whose children were delivered dead (or macerated), whilst he found none in those who gave birth to living children.

—La France Med.

A case of fatal hemorrhage after cutting the lingual frenum is reported in La France Medicale.

PATHOGENY OF BORBORYGMI.

BY SABRAZIO AND LAMACQ.

1. Spasmodic contractions of the diaphragm play an essential part in their production.

2. The stomach is large, bilocular, contains liquid and gas arising from abnormal fermentations. The rythmic bruit does not exist.

3. The neuropathic condition of the patient favors the appearance of diaphragmatic spasm.

4. By reducing the gastric curvature by means of a sound and bringing about an energetic compression of the stomach the abnormal sounds disappear.

INFANTILE HYSTERIA.

Infantile hysteria presents the same varieties as in (Bezy, La France Medicale) that of adults, namely, convulsive, non-convulsive and a variety simulating more or less special diseases of childhood. Convulsive hysteria in the child presents the same aspects as in the adult, but it rarely at the onset presents the complete type of a full attack. The attack supervenes after great moral emotion, hypnotism or a terrifying dream. Among the limited forms are: Chorea, which in many cases is a manifestation of hysteria. Spasmodic hysteric cough, which simulates whooping cough or simple bronchitis and often occasions errors in diagnosis. This cough, permanent, or coming on occasionally, is neither paroxysmal nor asthmatic, is very tenacious, ceases during the night, is cured suddenly, and recurs easily. Frequently in order to detect this mono-symptomatic hysteria it is necessary to make the diagnosis by exclusion of disease of larynx or air

passages in general. The hiccough and snuffling, the stammering which appears following any emotion or injury, are easily recognized, but may exist without other hysteric signs. Electric chorea (Bergeron's disease), with its rhythmic and sudden accessions seated almost exclusively in the head and lower limbs. This is considered hysterical by many authors. Partial pseudo-epilepsy, simulating Jacksonian epilepsy, is rare, but is distinguished by the absence of paralysis in the convulsed limbs and the very considerable number of attacks without cerebral involvement. Among the "facts" of non-convulsive hysteria may be cited paralysis, with or without atrophy, commencing about the age of 9 or 10 years and corresponding with the rigidities, and often accompanied by anesthetic zones. The paraplegic form is frequent, but it is true or false, and may take the place of hysterical incontinence of urine. Rigidity of muscles, an early and frequent form of the disorder—a form in which the patient can move his limbs when seated or lying, but is unable to stand upright or walk —is frequent in childhood and may be the first manifestation of hysteria. Digestive disorders are not frequent in the child. They may consist of anorexia, true gastralgia, fecal vomiting; sometimes pseudo-appendicular signs are present.

Trophic Disorders and Muscular Atrophy.—Hysterical muscular atrophy is admitted, but is rare. The atrophy may accompany the rigidity. Cases of nervous urticaria, difficult fever, edema of different parts, angio-neurotic tumors of pugnacious character, gangrenous, cutaneous patches have been noticed. Hemorrhages are rare, but hemoptysis and hematuria have been noted. Mutison is not frequent, with or without disorder of the speech; it may be preceded by vertigo. Aphonia with unclouded intellect are the diagnostic signs. Circulatory disorders are seen in palpitation, intermittent pulse, alternate flushing and paleness, syncope. Trembling is rare, seated in the upper limbs, and is exaggerated by intentional movements. Pseudo-arthritis has an epidemic aspect and is accompanied by zones of hyperesthesia. Anesthesia and hyperesthesia show nothing special. Psychic disorders are interesting. The little patients are precocious, learning quickly, desire to be admired, have quick affections, are impressionable and jealous and odd. They are also liars, from imitation, interest, desire to do harm to others and from hallucinations. Delusions are frequent, and the diagnosis with epilepsy is difficult. However, we may say that the epileptic delirium is made up of impulse and violence —hysteric delirium of halucinations. Hypnotism, somnambulism, attacks of sleeping—the first is rare, the second frequent and also the third. Natural somnambulism in the child is indicative of hysteria. The neurosis may be present or show later. Among signs of hysteria simulating affections more or less special to childhood may be mentioned pseudo-coxalgia, pseudo-Potts' disease, pseudo-meningitis, with crisis of headache; pseudo-spasmodic humiplegia, scoliosis, incontinence of urine and nocturnal terrors are easily diagnosed. The prognosis of infantile hysteria is good, if treatment is commenced early. The latter consists of perfect hygiene, isolation, hydrotherapy, valerian, etc.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

*BRIEF NOTES ON INFLAMMATORY, CYSTIC AND DEGENERATIVE DISEASE.

CYSTIC AND SUPPURATIVE LESIONS OF THE TESTES.

It yet remains an open question whether or not cystic disease of the testes is directly or remotely connected with inflammatory changes. As a complicating factor in inflammatory lesion cysts most certainly do exist, but as independent formations, as those of the ovary and elsewhere, they undoubtedly do. Sometimes we will find them proliferating, when they no doubt depend on disturbances of nutrition. Curling believed that they sometimes depended on occluded seminal tubules. The various metemorphoses which they often undergo have been well described by Bottcher (Dorp. Ztcher, 1871, 14, 4). Waldeyer believed that most cysts of the testes depended on changes in the epithelia. He found such conditions in the ovary and the testicle alike in the newborn (Microscop. Anat., pp. 465 and 151). Rindfleish regarded them as a colisa degeneration of a vascular origin (Handbuch, 1873, p. 481). Delfan believed that they consisted essentially in degenerative changes in dilated tabules, although their myxomatous appearance sometimes rather suggested their lymphoid origin (Malad De Voies Urin et Des Organs-Genit., p. 939, ch. XII). Encysted hydrocele of the testes consist of a tumor senile and pedunculated, usually situated at the head of the epididymis. It springs up from the remains of the Wolfian bodies and contains spermatozoa. Microscopical examination of removed fluid always determines the precise character of these neoplasmata.

Mernet has described as dermoid cyst springing from the base of the testes and encroaching backward into the perineum. Pearce Gould has met with a large dermoid cyst of the testes which had been mistaken for hernia (Lancet, Nov. 7, '94. Bull de Soc. de l'Accat., Nov., '95): Dr. Robert Taylor, of New York, has called attention to the marked tendency of adeno-sarcoma of the testes to undergo central cystic changes (Jour. Cut and Genito-Urni Dis., Aug. 94). Brindel, Krewisiki and others have noted this same transformation of elements in other diseases of the testes than in malignant disease (Jour. De Med., Bordeaux, Mar., '91).

PRIMARY AND SECONDARY CYSTS OF TESTES.

Primary cysts of the myxomatous elements of the spermatic cord in the newborn is common enough, but as a primary pathologic state it is very rare in the testes, almost never in the epithelial elements, occasionally in the epididymis, and most frequently in Morgagni's bodies, or the so-called hydatids of Giraldes.

As a secondary lesion, in either specific or malignant disease of the testes, it is very frequent; the elements of the cysts generally consisting of degenerate epithelia. Suppurative degeneration—intracystic—

no doubt do occur in the testes as well as elsewhere. It may occur as well in the deep parenchymatous as those located on the surface of the organ.

This metamorphosis, no doubt, is attended with microbic invasion, but it is first induced, without doubt, by constitutional conditions or local injury to the part. For example, one may be conscious of an elastic fullness in one of his testicles, which will never give him any annoyance, possibly, unless he develop grippe or tuberculosis, or has in some manner sustained a contusion of the testicle. Now, local with constitutional symptoms are made manifest with evidence of suppurative changes, which may go on to spontaneous discharge, widespread diffusion or possibly inspissation, disintegration and resorption.

SUPPURATIVE TESTES, INFECTIOUS OR CONSECUTIVE TO MALIGNANT DISEASE.

Tubercular testes or any description of open suppuration of the testes is not often met with, except in connection with pulmonary disease. The progress of the infection is slow, as a rule, until advanced stages of the lung disease are reached. There are many exceptions, however, for quite a few cases presenting features of tubercle, with abscess formation, have but indefinite and uncertain signs of lung disease.

In tubercle testes the histological elements of the paronchyma are first involved, probably the lymphatic and plasmic tracts, at the outset; later capillary thrombosis succeeds, and epithelial invasion follows:

When tubercular bacilli are found in this type of suppuration we usually see them in greater number around or within the nuclei of the cast of epithelia than in the protoplasm.

In undeveloped cases of tubercular suppuration of the testes it is easy to conceive of transference of the malady to the female, or its development in the fetus through the bacteria acting directly on the cuboidal neclei, of which the spermatazoa are ultimately formed.

It is well to remember that in dealing with purulent testes we must deviate in our treatment of it from a well-established law in surgery, viz., not to hazard any extensive mutilating operation on the organ of the subject of well-established tuberculosis of the lungs.

There are very cogent reasons for this departure: Because in suppuration, tubercular orchitis, with psychical disturbances are often well accentuated, our patient is morose and extremely despondent and more in certain instances, when the tension of the pyogenic membrane is considerable, the degree of bodily exhaustion and cardiac depression may be alarming. I saw a man last year who was brought near the moribund state by an interstitial, tubercular abscess of the right testicle, but free incision, evacuation and draining effected the most remarkable transformation. Several other instances have come under my care with similar salutary effects after incision or castration. Another reason, independent of effecting relief, comes from surgical intervention here; the patient, for a time at least, rapidly regains strength and vigor; an additional lease of life is enjoyed.

Recent microscopical examinations have demonstrated that when acute suppurative orchitis follows typhus, typhoid fever or pneumonia the bacterium coli or pneumococci are present in great numbers. It is most extraordinary to note when the ravages of gangrenous erysipelas seize on the scrotal tissues how the testes and end stand out nude and defiant of the streptococcus, so dreaded in the serous or connective tissues.

Degenerative changes affecting the testes may be divided into: First, those attended with marked atrophic changes, or wasting and shrinking of the organs; second, those in which the interstitial pathologic changes destroy the anatomic, secreting elements and function, without diminution in volume of the organ.

Of the first we have the most marked examples in those cases of imperfect descent or imperfect development of a congenital origin, in

ectopic testes. In this class atrophy is generally limited to one side.

Of the second division we have enlargement from vascular engorgement, a low grade of hyperplasia or interstitial serous infiltration. When trophic changes of the foregoing description are unilateral the pathologic changes are in most instances primarily in the blood vessels and in the veins, the individual has so-called spermatocele, varix or phlebectasia, the nutrition of the gland is impaired, there is diminished function in proportion to the extent of degenerative changes.

*By Thomas H. Manley, M. D., Clinical Recorder, July, 1897.

CERTAIN CYSTS OF THE ABDOMINAL WALL,

was a paper confined to a consideration of abnormalities of the urachus. After referring to the anatomy of the structure he first took up the consideration of vesico-umbilical fistula. These fistulae are not very uncommonly encountered during infancy and childhood. They frequently close spontaneously. In adult life the condition is unusual. As an instance he quoted cases reported by Freer, of Washington; Schullenbach, Hoffman and Holscher. The last-named is somewhat remarkable in that it followed an attack of gonorrhea. A man, 25 years of age, had a stricture as a result of that disease, the atresia of the canal being so great that it was only with difficulty that a filiform bougie could be passed. From this condition he suffered during several years, when the habitual retention of urine in the bladder caused a mechanical dilatation of the urachus, which set up an ulcerative process and caused perforation of the umbilicus through which the urine found exit. It was easy to completely evacuate the bladder through this opening by compressing the viscus above the symphysis pubis.

Usually there exists in an acute or chronic form some pronounced disease of the urethra or bladder, resulting in retention of urine or great vesical tenesmus. Suddenly there develops a tumor just above the pubis, at first of small size, distinctly circumscribed, quite hard, nonfluctuating, on account of the tenseness of the walls, and sometimes very tender. There is marked diminution in the amount of the urine, and usually great dysuria. Nausea, vomiting and great depression ensue. Pain over the entire lower abdomen is a constant symptom. Gradually the tumor enlarges, becomes softer, more elastic and fluctuating. The local signs and general symptoms depend entirely upon the character of the urine, which is forced backward into the urachus; if it is septic a purulent inflammation of the walls of the urachus develops and the hypogastric tumor may closely resemble an acute abscess. There is, however, a frequent and more fortunate termination for these cases, in which the tumor retains vesical connection, as by catheterization or otherwise the distended bladder is relieved, the urachus is drained into the bladder, the tumor suddenly disappears and all pain and symptoms quickly subside.

The essayist then referred to the form of urachal cyst arising from a dilatation of the greater portion of tube, the vesical and umbilical ends of which are closed, and reported a case occurring in his own practice. The patient was operated upon on June 20, 1896. There apparently was no ligamentous attachment between the cyst and the bladder. The cyst was removed and an area of peritoneum extending from about three inches above the umbilicus to the symphysis and from two inches to the left of the linea alba and throughout the lumbar and iliac regions of the right side was separated from the parieties. Twenty-four hours after operation the patient became very dull, vomited freely and was inclined to sleep. She died the following day. Upon autopsy the entire detached peritoneum on the right side was found to be gangrenous. The peritoneum had not been stitched to the abdominal wall during the operation, as is was thought intraabdominal pressure would restore it to its former position.

—By Dr. Richard Douglas, of Nashville, Tenn., Rich. Jour. of Practice.

Miscellany.

EUCAINE "B" AS A LOCAL ANESTHETIC IN SURGERY.

BY DR. LOHMANN, BERLIN.

At the suggestion of Dr. Thomalla, surgeon in chief of Accident Station No. VI, I now proceed to publish the results that we have obtained from the use of Eucaine "B" as an anesthetic in the domain of surgery. Quite early in our experience with the drug we abandoned the use of the weaker (3 per cent.) solutions, whose action was not satisfactory, and employed 10 per cent. solutions, with which we obtained most excellent results. We had occasion to employ the anesthetic in this concentration for the opening of abscesses and the incision of carbuncles, inflammations of the cellular tissue, of the tendonous sheaths, in the suture of tendons, in the removal of a great number of foreign bodies, and for the exarticulation of digits.

In the treatment of the abscesses and carbuncles we injected one to two hypodermic syringefuls (15 to 30 minims) of the 10 per cent. solution, and we could then quietly and without any pain make the necessary incisions and curettings. The same amount of the anesthetic was employed for the painless operation of small abscesses, for the larger ones three to four syringefuls were needed. We are fully convinced that any abscess at all can be opened painlessly under Eucaine anesthesia; for as much as 3 grms. (45 grains), equaling 30 syringefuls of the 10 per cent. solution, may be injected in the adult without any fear of causing toxic symptoms.

Among the many foreign body extractions that were done under Eucaine "B" I may be permitted to mention a very characteristic one more in detail. A needle had penetrated the foot of a girl 10 years of age and had been broken off, leaving the point, about 2 cm. (7-8 inch) long, imbedded in the tissues. The needle had entered the foot at the dorsum; its point lay under the fasciae, deep down in the foot. From three-quarters of an hour to an hour were required to locate and extract the needle. After the use of a single syringeful of the 10 per cent. solution both operations could be quietly done. Only toward the end of the operation did the patient show slight sensibility.

In the exarticulation of the fingers from one to two syringefuls of the solution were sufficient. The first case of this kind was that of a 13-year-old boy, in whom we exarticulated between the first and second phalanx of the third, and the second and third phalanx of the fourth fingers. For both digits we used about one and one-quarter syringefuls; about three-quarters of a syringeful upon the flexor and one-half syringeful upon the extensor surfaces. When we commenced to operate, after the lapse of about a minute, the boy complained somewhat, but by pricking the finger with a needle, which the boy did not feel at all, we soon convinced ourselves that his cries were not caused by pain. When the boy's face was covered both exarticulations were done without further disturbance. Another boy, in whom an exarticulation was done under the influence of about one and one-half syringefuls of the 10 per cent. Eucaine solution, cried dreadfully when the first dressing was removed, about a week after the operation, though he had been entirely quiet during the surgical procedure itself.

A third and very instructive case deserves to be mentioned. A factory operative 20 years old had received a severe contusion of the second, third and fourth fingers of the

left hand. The exarticulation of the terminal phalanx of the index finger and the amputation of the middle finger were indicated; on the ring finger only the nail was destroyed, being almost torn off. I injected into the index finger about one and one-half syringefuls of a 10 per cent. Eucaine "B" solution, using one syringeful for the flexor and one-half a syringeful for the extensor surfaces of the second phalanx; the same amount was similarly employeded for the middle finger, and the ring finger received one-half a syringeful. During the operation, which was begun about a minute after the injection, the patient complained of at first slight and later more violent pains in the ring finger, which was the one less severely injured, and had received only one-half a syringeful of the solution. In both the other fingers there was not the slightest pain during the operation.

In none of our cases did we see any unpleasant by-effects or toxic symptoms. In regard to the statement in the Bulletin Medical, 1897, No. 47, that "Eucaine 'B' is much less toxic than Eucaine 'A'—as a local anesthetic eucaine has been found to be greatly inferior to cocaine," can only repeat that my experience shows that eucaine "B" in 10 per cent. solution is much more powerful in its action than cocaine and the other older local anesthetics.

In view of all its advantages, besides the above-mentioned ones, its non-decomposition under sterilization, and also because of its favorable and very satisfactory action, eucaine "B" deserves to be more generally employed in surgery. We cannot recommend it too warmly to the profession in general, and more especially to the country practitioner, whom it will help over many difficulties.

—Therapeutische Monatshefte No. 8, August, 1897, p. 427.

HYPODERMIC ALIMENTATION WITH OLIVE OIL.

Fornace and Micheli have been experimenting in five cases with hypodermic injections of olive oil (50 c. cm. at a time). In all the cases there was more or less marked saving in the nitrogen eliminated, and a notable increase in weight and improvement in the general condition. Practically none was passed as fat in either the urine or the feces. No fat embolism was observed. In one case after 30 injections small nodules containing a drop of oil were found in the lymphatics at the site of injection. The authors consider that the nutritive value of these hypodermic injections are higher than that of rectal or vaginal nutritive enemata. No inconveniences followed the use of the olive oil in injections, and they were well borne by the patients.

—Rif. Med., July 14 and 15, 1897.

MILK AND AMMONIA EXCRETION.

Ad. Czerny and Keller state in a preliminary communication that the considerably increased ammonia excretion in suckling infants suffering from gastro-intestinal affections is due to the presence of unusually large quantities of acid in the body. Acids may arise owing to fermentative processes in the intestinal canal or through intermediary metabolism. Milk gives rise to acid production through the fat, milk, sugar or albuminous matters present in it. The authors have sought to discover by experiment which of these constituents gives rise to the greatest ammonia excretion. As feeding with the single constituents was found impossible, they have experimented with various kinds of milk containing different amounts of these constituents. Neither the albuminous matters nor the milk sugar produced it, whereas by diminishing the fat the ammonia excretion became less, and vice versa. The increased ammonia excretion in suckling infants with gastro-intestinal affections is due to the splitting up of fat. The resulting acids are not destroyed in the body, as in these cases the oxidation processes in the body are lessened. Thus a suitable diet in these cases is only such that the nutrient substances contained in it are burnt up in the body.

—Centralbl. f. inn Med., August 7, 1897.

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The Times and Register.

VOL. XXXIV. No. 9. PHILADELPHIA AND BOSTON, NOVEMBER 6, 1897. WHOLE No. 949.

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Original

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

ON SOME OF THE PHYSIC AND ANATOMIC CHARACTERS OF TUMORS, AS BEARING ON A NOSOLOGICAL DIVISION.

Heretofore our aim has been to consider the subject of ancology rather from a practical than a systematic or methodic standpoint; the clinic features, the symptomatology and pseuso-phrases of tumors than enter on what must be now taken up if we are to place the subject on a scientific basis and illuminate it with light of the latest study and research on this important topic.

In dealing with purely histologic elements Heitzman's classification will be adopted as the simplest and most comprehensive; in the meantime, as a preliminary step, it may

be well to first group tumors according to their regional situation and their physic characters.

REGIONAL DIVISION.

1. Pericranial Tumors.—(a) Of the scalp, (b) the pericranium, (c) the cranial walls, endocranial tumors, meningeal, cerebral, etc.

2. Facial Tumors.—(a) Of the integuments and subcutaneous, soft parts; the osseous elements, (c) of the sinues and (d) of the appendages and organs, (e) of the eye ball or the orbital cavity, (f) aural, nasal or oral and those tumors.

3. The Cervical Isthmus (Cervical tumors).—(a) Glandular-adenoma, (b) vascular, (c) congenital, (d) visceral, thyroid.

4. Tumors Involving the Cervical Passages.—(a) The vertebral canal, (b) the pharynx, (c) the larynx, the trachea and esophagus.

5. Thoracic Tumors.—(a) Those involving surface organs as in the mammary and axillary regions, (b) those arising from the osseous framework, etc.

6. Intra-Thoracic Tumors.—(a) Vascular, (b) visceral, (c) interstitial organs.

7. Abdominal and Pelvic Tumors.—The number and different classes of intraabdominal and pelvic tumors is large: (a) Visceral, (b) vascular. Probably the greater number are pseudo-tumors, as hernia, erupting on the surface; ectopic, enlarged organs, abscess, etc.

8. Over the spinal areas, as the abdominal surface, there are few new growths. The intrinsic have essentially the same anatomic origin as the intracranial.

9. Tumors of the Passages.—(a) Rectal, (b) vaginal, (c) urethral.

10. Tumors of the Extremities.—The further we advance from the trunk and those organs tributary to respiration and digestion the rarer become every description of new growths, and hence, except vascular and osseous tumors, others of serious character are not very common.

Tumors are generally designated also according to the organ, structure or elements from which they develop, and hence we speak of, for example, hepatic tumor and osseous, hematoma, melenotic sarcoma, etc.

For convenience of description this arrangement, with various modifications, is adopted by all authors. For practical purposes, however, in order to avoid needless prolixity and complexity of detail two divisions are quite enough, as applied to anatomy: First, the organ or the structure involved must be indicated in the nomenclature, and secondly the finer anatomic or the new elements.

PHYSIC CHARACTERS.

Every practitioner is familiar with the importance of always cautiously interpreting the gross characters of a tumor by the aid of the senses, and let us admit it right here, that although the microscope will often serve us as available aid in obscure doubtful cases, in the vast majority the practiced, cultivated use of the senses, with ample experience, will promptly enable us to make an accurate diagnosis.

Therefore tumors are described as:

First. Solid or semi-solid.

Second. Movable or immobile.

Third. As fluid, as fluctuating.

Fourth. As tympanic—wind or gas tumors.

Besides aids derived from percussion, palpation or manipulation we utilize vision and olfaction. The position of an abdominal tumor in the female will often suggest whether it be physiologic or ovarian. The eye will give us great assistance in the periphery, at the orifices and in the open passages. The visual characters of many tumors, simply by macroscopic inspection, will often quite alone stamp their true characters.

In an ulcerating, malignant tumor the peculiar malodorous discharge can never be mistaken for anything but death-dealing cancer. The foul odor is, perhaps, not more intolerable than decomposing animal matter or hospital gangrene, and yet it is quite distinct from either.

AMITOL IN DISEASES OF THE SKIN.

By I. M. Koch, M. D., Philadelphia, Pa.
Dermatologist to the Franklin Free Dispensary.

Amitol is a coal-tar derivative, its chemical name being Para-acetyl-amid Phenate. It occurs as a powder, almost white in appearance, slightly soluble in water, freely soluble in alcohol, ether and chloroform. It has no odor.

My attention having been called to the merits of this only as a substitute for iodoform and the various coal-tar products, which are objectionable by reason of their penetrating odor or high cost, rendering their use prohibitive among the poorer classes. I desire herewith to report a series of cases occurring in the skin service of the Franklin Free Dispensary and in my private practice, where the use of amitol has been of signal benefit, proving by its local, antiseptic, astringent and antiparasitic properties a valuable addition to remedies of this class.

Besides being of equal value with iodoform, aristol, dermatol, iatrol, etc., as a local antiseptic, it is superior to them as a healing agent, and because of its light specific gravity (less than one-third of an equal weight of iodoform) it will cover a much greater area.

Again, amitol by reason of its lower cost is an available remedy in dispensary and poorer practice, where iodoform is often used under protest on the patient's part, and is associated with the idea of some disgusting and shameful venereal disease. Indeed, at present the use of iodoform is almost limited to hospital practice, and it is the duty of the physician who wishes to hold an intelligent and discriminating clientele to find as good, and if possible better, substitute for this most peculiar, penetrating and easily recognized of drugs.

Amitol may be used in the form of a lotion dissolved in alcohol or ether, or as a salve, incorporated in one of the fatty bases, as lanolin, zinc ointment, etc. When a deep action into the hair and sebaceous follicles of the skin is desired, lanolin is the best base, either pure or rendered more emollient by the addition of a few drops of olive or castor oil. For a more stimulating action on the glands and follicles of the skin, lanolin, mixed equal part with vaseline or one of the mineral fats, is most efficacious.

As a dusting powder, amitol used alone or mixed with one of the simple protective powders, as starch, arrowroot or lycopodium, finds a large and varied field in the intertrigos, erythemas, moist eczemas, herpes, ulcers, chancroids and chancres.

Amitol gauze, to be used as a dressing for wounds, after operations, etc., and in certain intertrigenous forms of skin disease may be made by impregnating plain gauze with an etheral solution containing from 15 to 30 grains per yard. Amitol is manufactured and was first introduced to the profession by Messrs. Long & Co., of Philadelphia.

Case 1—Chronic Eczema.—Annie S., aet 60 years. Covering both surfaces of arms is a more or less grouped,mixed papulo-pustular eruption, which, on the leg, especially the lower third of the left leg, is decidedly pustular in character. The surface is reddened, inflamed and excoriated from the intense pruritis, extending over a period of 12 years. The legs especially show marked infiltration of the skin.

Scattered over the rest of the trunk are small papules, from the size of a millet seed to that of a pea, which itch intensely and have caused the patient much suffering. The tongue is coated, flabby, appetite poor, complains of bad taste in the mouth, bowels irregular. The following was given internally, a teaspoonful in water before meals:

R—Tinct. nucis vomicæ.....dr. iii
Aloini .....gr. ii
Spts. ammon. aromat.....dr. iv
Tinct. gent. co.....oz. i
Aquae .....qs. ad. oz. iii

Externally:

R—Creosoti .....m xx
Amitol .....gr. xl
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa. oz. ss

At the end of six weeks the patient was discharged cured.

Case 2—Herpes Labialis Pediculosis Capilis.—Florence H., aet 11 years. At one corner of the mouth was an acute herpetic eruption, which healed in a few days under:

R—Amitol .....gr. x
Ungt. zinci ox. benz.....dr. iv

On the scalp, especially at the nape of the neck, the skin was red, excoriated, covered with thick, yellowish crusts, streaked with blood; itching intense. The artificial eczema was due to the head louse, whose nits were well marked in the long hairs. The patient was directed to wash the hair in vinegar and comb it with a fine-toothed comb dipped in the same; then to apply the following wash:

R—Amitol .....dr. i
Spts. vini rect.....oz. v

An emollient salve containing 40 grains of amitol to the ounce was then rubbed into the scalp. In a few weeks all evidences of the parasitic irritation were completely removed.

Case 3—Impetigo Contagiosa.—Jennie M., aet 11 years. Begun three weeks before she presented herself at the clinic about the region of the mouth as "small red pimples." At the present time there is a large semilunar patch, covered by thick crusts on the chin, and scattered in the neighborhood over the cheeks, upper lip and eyebrows are discrete pustules about the size of a pea, surrounded by a well-marked areola. Does not complain of itching. The patient was decidedly anemic and weak; tongue coated, bowels fairly regular. The following was given internally three times daily after meals:

R—Ferri. pyrophos.....gr. ii
Strych. sulph. .....gr. 1-80
Ac. arseniosi.....gr. 1-40
Quininæ sulph. .....gr. ss

Externally:

R—Amitol .....dr. ss
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa. oz. ss

Under the above treatment the patient made a steady and uninterrupted recovery.

Case 4—Impetigo Contagiosa.—Irma S., aet 22 months, a half sister of the above case. About middle of the lumbar vertebral region was a large confluent papulo-crustaceous patch. About the sacral region and mons veneris were a number of discrete, pea-sized papulo-pustules surrounded by the characteristic areola. There were also several discrete lesions of the same character on the left cheek. The child made a rapid recovery under:

R—Amitol .....gr. xx
Ungt. zinci ox. benz.....oz. i

Case 5—Acute Eczema.—James G., aet 23 years, waiter. He had always enjoyed good health, with the exception of one attack of gonorrhea over a year ago. At present he complains of intense itching of his arms, body and legs, especially at night; also around his neck. The surface is red, erythematous, covered by small papules and in places on the flexor surfaces are small vesicles, grouped, containing a clear, yellowish fluid. Where these have been scratched a sero-purulent discharge covers the surface, and in the neighborhood are large excoriations. The patient looks in good health, but says his urine is dark and sometimes gives a burning sensation on urinating. He also had a bitter acid taste at times. Tongue is large, deep red and furrowed; never had an attack of rheumatism; bowels are regular. The following was given internally after meals and before retiring:

R—Salolis.
Salicin .....aa. gr. v
Strych. sulph. .....gr. 1-60

Externally, after cleansing the parts with olive oil:

R—Creosoti .....m xx
Amitol .....dr i
Plumbi. carb. .....dr. ii
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa. oz. ss

Case 6—Chronic Varicose Ulcer.—Mary O'B., aet 45 years, washwoman. On the lower third of the left leg is an ulcer which has been steadily enlarging and causes her much trouble. It began about four years ago and has resisted all treat-

ment. She is the mother of six children and has always enjoyed good health.

The ulcer is about the size of a silver dollar. The walls are hardened. The surrounding area is congested, dark blue in color, infiltrated and covered by a thin, shining skin. The base is covered by a thick, black, adherent crust, under which is a sanguino-purulent discharge. The veins of both lower limbs, especially the left, are varicose.

The crusts were first softened and removed with olive oil. Then the cavity was washed thoroughly with a solution of pyrozone, and the base of the ulcer stimulated by a solution of silver nitrate, 30 grains to the ounce. After this amitol was dusted over the surface. Recovery was rapid after the first application.

Case 7—Chancroid—M. L., aet 31 years, salesman. About ten days before consulting the writer, while on the road, had a suspicious connection. Along the margin of the prepuce were three deep, pus-excreting ulcers, surrounded by light, inflammatory zone. They were closely in apposition, the centrol one and its right-hand neighbor being on the point of junction. The right inguinal glands were enlarged and painful. Amitol dusted over the ulcers caused them to dry up after the surface was thoroughly cleansed with hot water. The resultant scar was very thin and scarcely perceptible..

Case 8—Recurrent Eczema.—Elenor C., aet 28 years. The disease first made its appearance six years ago on the lower limbs. Under treatment it disappeared for three years, but since that time it has reappeared every summer, to gradually fade away as the cold weather set in. On both lower limbs, especially in the popliteal spaces, are small, red papules, which itch intensely at night, and along the tibial surfaces are long excoriations, covered by dark, brownish crusts. At times the patches are moist, but at present are rough and dry. She complains of cold feet, with a wet and clammy condition of the soles, and states that she is subject to weak, depressing nervous attacks, which leave her much exhausted. The appetite is good, bowels habitually constipated. She has a bitter taste in the mouth morning and evening, and is much troubled by eructations of gas and severe headaches.

Internally she was given nux vomica with a bitter tonic. Externally:

R—Creosoti .....m xx
Amitol .....gr. xl
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa. oz. ss

In the course of a few weeks the lesions had entirely disappeared and the condition of her digestive functions was much improved.

Case 9—Tertiary Ulcer.—Frank Z., aet 52 years, machinist. The patient presented an ulcer about the size of a dime, which he stated had begun as a small, hard lump about two weeks previous on the lower third of the right tibial surface. The ulcer had a punched-out appearance, the walls were hard and infiltrated and the base secreted a yellowish pus mixed with epithelial detritus, blood, etc. The man had a chancre 30 years ago and had had rheumatism. The mixed treatment of hydrarg. chlor. corr. and kali iodide was given internally. Externally the ulcer resisted the most careful treatment. Calomel, bismuth subnitrate, carbonate of lead, boric acid, zinc oleate were used both in powder and ointment form, without avail. Finally the following was applied:

R—Amitol .....dr. ss
Creosoti .....m. v
Ungt. zinci ox. benz.
Lanolini .....aa. oz. ss

Over this a powder of amitol, one drachm to one ounce amylum, was dusted. In a very short time the ulcer healed as if by magic, and what threatened to be a large, spreading tertiary necrosis was coverel by thin, friable, cicatricial tissue.

Let me here state that in the treatment of ulcers no medicament will avail unless the walls and base of the ulcer are first thoroughly cleansed of broken-down tissues and the surface then treated with local antiseptic and stimulating applications.

Case 10—Eczema Seborrhoicum.—Isaac W., aet 17 years, packer. The disease has been confined to the

scalp for 13 years, and has remained during the last two years in about the same condition. The surface is covered by adherent, yellowish, greasy scales; singly and in groups are small red papules. Where the hair follicles emerge there are in places small pustules, which are pierced by the hair shaft. The hair dry, lustreless, but quite firmly attached. His general health otherwise is good. Under the following treatment the condition of the scalp was much improved.

Externally, to be rubbed into the scalp:

R—Amitol .....dr. ii
Tinct. cantharidis.....dr. ii
Spts. vini rect.
Aq. hamemelis dest.....aa oz. iii

Internally:

R—Liq. arseni et hydrarg. iodidi...dr. i
Syr. ac. hydriodici.....q. s. oz. iii
Sig.—Teaspoonful three times daily.

Case 11—Recurrent Eczema.—Wilhelm S., aet 40 years, smith. Six years ago the patient had scarlet fever. Since that time each spring about May a small papular eruption appears over the entire body. The papules are small, grouped, and itch intensely. He also had an attack of rheumatism 18 years ago. His general health is good. He was given externally:

R—Ac. carbolici.....m. x
Amitol .....dr. ss
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa oz. ss

Internally:

R—Liq. potass. arsenitis.....dr. ii
Syr. ac. hydriodici.....oz. iii
M. Sig.—Teaspoonful three times daily.

He improved rapidly under the above treatment. The case will be examined for uric acid at intervals, with a view to a permanent cure.

Case 12—Tertiary Syphilis.—George Z., aet 54 years, engineer. Five years ago had a chancre. At present there are two ulcers on the left knee cap, about one-eighth inch deep, which secrete a peculiar-smelling pus. They are close together, on a generally reddened, undermined surface, which, about the periphery, presents smaller ulcers of a similar character. Their walls are hard, infiltrated and have the characteristic punched-out appearance.

Amitol, one drachm to the ounce, was given locally; afterward amitol powder was dusted over the ulcer, which was first cleansed with an antiseptic oil.

Internally:

R—Hydrarg chlor. corr.....gr. ss
Potass. iodidi.....dr. iv
A. cinnamomi.....oz. iii
M. Sig.—Teaspoonful in water three times daily.

A rapid improvement was noted after beginning this treatment.

Case 13—Chronic Eczema.—Rheinhold Y., aet 24 years, cabinetmaker. The eruption began six years ago, appearing on the back, chest, legs and arms. The lesions are small, papular and itch intensely. In places on the external surfaces of the arms and legs are patches showing marked infiltration, where the papules have coalesced.

These are covered by fine white scales. The patient has indigestion; tongue coated white, bowels irregular. His diet was corrected and the following given after meals and at night:

R—Salolis .....gr. v
Pepsinae pur. .....gr. ii
Pancreatin. .....gr. i
Strych. sulph. .....gr. 1-40

Externally, a lotion:

R—Amitol .....dr. i
Spts. vini rect. .....oz. ii
Liq. calcis .....oz. iv

Condition much improved.

Case 14—Acute Eczema.—John F., aet 14 months. Six days before consultation the eruption appeared scattered over the child's body. At present there is a group of eight pustules on the chin, a smaller group on the right cheek. On the right eyelid there are two, also a few on the nose and upper lip. On both arms is a small papular eruption, especially well marked on the flexor surfaces. The integument is red, weeping and torn. Bowels are loose and bad smelling, at times, greenish in color. The child was given calomel, gr. 1-10 internally.

Externally:

R—Ac. borici .....gr. xx
Amitol .....gr. xx
Creosoti .....m. v
Ungt. zinci ox. benz.
Ungt. aq. rosae.....aa. oz. ss

Under the above treatment a cure was rapidly effected.

Case 15—Acute Eczema.—Mrs. F., aet 36 years, mother of case 14. On the left breast just above the nipple

is a small patch, light red in color, which burns and itches intensely at times. There are a few discrete papules and pustules on a generally reddened, weeping surface.

An ointment of

R—Amitol .....gr. x
Ungt. zinci ox. benz.....dr. ii

The notes of the following cases, in which amitol was successfully used, were kindly furnished me by my friend, Dr. E. P. Bernardy, of Philadelphia:

Case 1.—Physician, age 48 years, suffering from eczema of the arms; very careful in his habits; not addicted to drinking of spirituous liquors; was a great sufferer from constant irritation of an eczematous cause. He had tried almost all sorts of applications, washes, salves, etc., without obtaining any constant relief. He called my attention to his case, when amitol was tried in powder form on cotton, and kept constantly applied.

The relief was soon obtained, and by its continued use for two weeks the case was cured.

Case 2.—Child about 8 years old had a stubborn attack of eczema of the face. Its stomach was out of order, but soon responded to treatment. A salve containing amitol oz. 1, ungt. petrolei oz. 1 was applied over the eruption constantly, the parts kept from contact with water. In a week the eruption was under control and in ten days more the face was clean and has remained so.

Case 3.—Girl 14 years old, had made the rounds of skin specialists, including a few dispensaries, called at my office in reference to her condition. The entire face to about three inches below was covered with a white, somewhat scaly eruption. Diagnosis: Psoriosis. After applying several washes and salves I applied amitol dr 1, ungt. petrolei oz. 1. The case has improved so much that, while not yet entirely cured, encourages us to believe that under this treatment cure will take place. Internally she is taking hig. potass. arsenitis three times a day.

Resume.—It will thus be observed that amitol was used in three cases of chronic and in four cases of acute eczema; two cases which I have called recurrent acute eczema, because of its tendency to recur periodically whenever the conditions of the system, season, etc., were favorable; one case of eczema seborrhoicum, one case of pediculosis capitis and herpes labialis, two two cases of impetigo contagiosa, one case of psoriasis, one case of chronic varicose ulcer, one case of chancroid, and two cases of tertiary syphilitic ulcers.

In all these cases it acted in a most satisfactory manner. Opportunity did not present to use it in lupus, epithelioma, rosacea or in tinea of various parts of the body. I will employ it in these affections as they come to my attention and report its action in detail at some future time.

—200 S. Twelfth street.

A REPORT ON THE USE OF SALOPHEN AND LYCETOL.

BY PAUL NORWOOD, M. D., LL. B.,
Formerly Assistant Surgeon to the St. Joseph Hospital, Omaha, Neb.

During the past year I have been using salophen and lycetol in the various forms of rheumatism, in nervous conditions, and the former drug also as an intestinal antiseptic. The deductions made are contained in the following cases:

Case 1.—Married woman, age 36; a history of repeated attacks of acute articular rheumatism. She was taken with an attack of bronchitis resulting from exposure, for which I was called. On the second day she developed a typical attack of articular rheumatism, involving the wrist joints, which were very painful and much swollen. The first day she was given three doses of five grains each of salophen and three-grain doses of phenacetine. On the second day

the pain was somewhat lessened, but I continued the same dosage. On the third day the condition warranted the withdrawal of the phenacetine, the salophen being increased to ten-grain doses every five hours. This was continued until the fifth day, when the patient was able to use her hands in feeding herself. The dose was then reduced to five grains every five hours, and this was maintained until the tenth day, when, aside from some cough the patient was very comfortable and, in a small way, resumed her work at sewing.

In this case I believe that the use of phenacetine and salophen in the beginning served to control the distressing cough. Stimulant expectorants were given later, but during the first four days I needed no other anodyne than that mentioned.

Case 2.—Married man, age 56; has had muscular rheumatism at different times during the past 30 years. Has received treatment at the hands of some of the best physicians in this country with a variable amount of relief at times. He claims, however, that my treatment has kept him more comfortable for a longer time than any other in his past experience.

This case was well-nigh hopeless, not only because of its chronicity, but in consequence of the rebelliousness of the patient in the matter of diet. He was a meat eater in an extreme sense, and I withheld the greater part of his favorite food. Thirty grains daily of lycetol in divided doses was the sole medicament. He is still under treatment.

Case 3.—Married woman, aged 48; has had five children, the youngest of which is 6 years old. She was suffering from chronic parenchymatous nephritis, due perhaps to obstruction of the ureters, by a small fibro-myoma situated posteriorly opposite the internal os. This tumor I removed with some difficulty and the part healed without an untoward symptom. The usual after treatment was followed without any change in the muscular pains originally complained of. In the second month after the operation I began to give her vapor baths and 15 grains daily of salophen, and this treatment has been persisted in for the past two months, with the result of materially diminishing the muscular pain. It has been necessary at times to give her strychnia or digitalis. The patient is still under treatment.

Case 4.—Young man, age 17, clerk, suffering from his third attack of acute articular rheumatism of both hands and wrists. He was placed upon phenacetine and salophen, two and one-half gains each, every four hours. On the second day the phenacetine was continued in the same dose, but the salophen increased to 10 grains every four hours. Locally I applied a liniment of iodine, aconite and chloroform. Patient resumed duties on the sixth day.

Case 5.—Single man, aged 28, a brass roller by trade, an ardent bicyclist, much given to racing. He was caught in the rain and taken down on the following day with his second attack of rheumatism, both ankles and feet showing articular inflammation. This was accompanied by diarrhea. I gave him 10 grains of salophen every four hours, with 5-grain doses of phenacetine as required. Locally I used the same liniment as in Case 3, alternating with hot ablutions. On the third day I discontinued the phenacetine and began to give him the elixir of quinine, iron and strychnine three times daily. In this case there was a valvular murmur which I am forced to confess I was unable to diagnosticate to my satisfaction, but I believe it to have been mitral. This led me to supplement strychnia sulph. hypodermatically, in 1-30 grain doses, three times daily during the first three days. On the seventh day the patient was up and about the house, and on the thirteenth day he returned to work.

Case 6.—Married woman, aged 22, suffering from severe and constant pain in the lumbar region due, as I at first thought, to uterine displacement which existed in a marked degree. After replacement of the organ and the institution of the usual treatment, however, the pain was scarcely less than before. This naturally led me to distrust my diagnoses, at least in part, and upon fur-

ther search I found the urine contained only about 200 grains of urea and six grains of uric acid daily. I put the patient upon 2 1-2 grain doses of phenacetine and 5-grain doses of salophen every four hours for the first two days. The pain subsided to some extent and I discontinued the phenacetine and gave six grains of salophen every four hours. This treatment with a corrected diet has brought the patient to a condition of comparative health, something that she has not known for a period of six or seven years. At present she is taking 15 grains of lycetol in divided doses daily, and I look for further improvement, as the latter drug has thus far increased the secretion of nitrogenous principles. I might add that in this case the subjective symptoms were more affected by salophen, while the excretion of urea and uric acid seemed much facilitated by lycetol.

Case 7.—Unmarried man, aged about 26, a mason. History of numerous attacks of acute articular rheumatism, always of the hands and arms. He was placed upon salophen and phenacetine, 2 1-2 grains each every four hours. Locally iodine, aconite, belladonna, chloroform, turpentine and a host of other drugs were tried. There was no improvement. I increased the dose of both phenacetine and salophen to five grains every four hours. It was of no avail. On the fifth day I had to discontinue the phenacetine. During the next three days I gave him 20-grain doses of the salicylate of strontium every five hours. This was equally powerless, and I tried colchium, guaiacum and the iodides. At about this time the dissatisfaction of the family was so evident that I could no longer appear to be ignorant of the fact and I asked for consultation. This was on the 17th day. This was met in such a way that I surrendered the case to my consultant immediately after our talk. I am ignorant of what measures were adopted, but the patient was bedridden for about five weeks, and is now scarcely able to work. I cite this case to show two things; in the first place that some cases won't get well under any treatment within a short time, and secondly, that after a pretty fair trial (not an exhaustible one) of salophen and other salicylates, the older remedies were equally inefficient.

In two cases of pelvic peritonitis I used salophen as an intestinal antiseptic, as well as for its effect upon the kidneys, and while it is not often possible to calculate the advantage of this line of treatment I firmly believe it a proper one for every case. Salophen seems to fulfill every requirement in these cases. It is diuretic, antiseptic, antipyretic; it is not unpleasant to take and is well borne by the stomach. I have not observed any depressing action on the heart. I believe that there is a wide field for its use.

Lycetol is an elegant drug for use in patients of fastidious tastes. It is pleasant to take, and in chronic cases that have been put through a course of old treatments this is a great advance. I have used it in several cases and with what I believe to be encouraging results. My first case was a very bad one of chronic rheumatoid arthritis, and was very noticeably improved after a week on 20 grains a day in divided doses. He continued to improve, but slowly, for the following month, when he thought that he was sufficiently well to discontinue treatment. Of course his trouble returned, and he believes that the treatment was a failure. I believe it very encouraging, indeed, and advised a long course of the remedy.

My second case treated with lycetol exclusively is still under my care and is taking 20 grains daily in divided doses. This he has beeen doing for three months, and is quite satisfied with the results. A steady but slow improvement is noticed, interrupted to a slight degree by sudden changes in the weather. These relapses (they are hardly that) are of very little moment when compared with the previous history, and do not interfere with the avocation of the patient.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

ABSCESS OF THE INTERNAL JUGULAR VEIN.

The Transactions of the American Otological Society, 1897, contains a paper by Dr. George A. Leland, of Boston, reporting two cases of lateral sinus thrombosis with abscess of the internal jugular vein, one ending in death and the other in recovery, which is very unique and interesting. In order that the reader may appreciate the delicacy of the operations and the importance of the symptoms the cases are here cited in the author's own detail:

Case 1.—Mrs. A. M., widow, of 32 years of age, nativity Nova Scotia. Admitted to the aural service of the Boston City Hospital October 24, 1894, coming under the care of Dr. E. D. Spear in his substitution for Dr. J. Orne Green, chief of the service.

The previous and family history presented no points influencing her present condition, except that she was of exceedingly nervous temperament and had had considerable treatment, surgical and otherwise, for neurotic or hysterical conditions. On coming to this vicinity six years ago began to have attacks of quinsy sore throat, of which she has had several; four weeks ago occurred the last attack, in which the abscess broke and discharged several times. Two weeks ago had severe pain in right ear, followed by discharge and relief of pain a few days later. Two days ago there was a recurrence of pain in and about the ear, with nausea and vomiting; was unable to retain any food. This is her first attack of ear disease. Has had indefinite chilly sensations, which led to the examination of the blood; no plasmodiae found.

Left ear not abnormal; right ex-

ternal meatus contains pus and the external canal is markedly reddened; a slight perforation in the inferior segment of the membrana tympani; no swelling nor soreness over mastoid. There is a small tonsillar abscess on the right side, size of a walnut. Hearing to watch—right 0, left 20 inches. Tongue moist, slight brown fur; no tremor, no symptoms of cerebral pressure. Right ear syringed with bichloride solution, catheterized and packed with a corrosive wick; one-eighth grain morphia given for pain. Pulse 92, temperature 100 degrees.

October 25.—Feels very much better, and no pain in ear since catheterization; discharge from ear much diminished. Temperature, 103.5 degrees, but no mention of a chill.

October 29.—After sleeping pretty well until last night, when was rather restless, a chill occurred about 1 o'clock A. M. Temperature rose to 104.5 degrees. Mind perfectly clear. Pulse of good volume and strength and about 90. Throat about the same. No pain.

October 30.—Had two slight chills last night; not much rise of temperature.

October 31.—A slight stiffness of the neck on the right side this morning, with some swelling and tenderness over the mastoid region. Leiter's cold coil applied.

November 1.—The writer on coming on duty this morning found the swelling over the mastoid less than has been before noted, but marked tenderness over the jugular vein. Some slight edema posterior to mastoid and over emissary vein and posterior cervical triangle. Patient complains of stiff neck and intense pain in the head. Mild opiate given with ice bag, which produced a quieting influence, but pain still quite severe. Pulse weak and patient looks badly.

November 3.—After having had headache yesterday over the right temporal and occipital regions extending down the neck, was somewhat hysterical, perhaps mildly delirious during the night. This morning rather more marked swelling and tenderness over the mastoid region. Cold coil again applied.

November 5.—Much more comfortable and less mastoid disturbance.

November 6.—Dr. C. F. Folsom kindly saw the patient. Considered that there was no cause for symptoms to be found other than those referable to the ear, and as the pain has this morning become more severe in the mastoid, extending downward and backward, operation is determined upon.

When brought to the operating table pulse was 90, temperature 100.6 degrees F. Just before anesthesia was complete pulse became thready in character and rapidly increased to about 160. It was thought best not to continue the etherization long enough for the complete operation, and so a simple exploratory Wilde's incision was made through the thin, cutaneous and periosteal covering of the mastoid. There was very little bleeding, and the cortex was found to be not abnormal.

November 13.—Although the temperature has been irregular the patient has appeared to improve; countenance looks better, and there has been no pain and no return of headache; was able to sit up one and one-half hours to-day.

November 16.—Temperature has again risen, and there have been marked fluctuations. Return of stiffness and pain in the neck, also in the extremities. M. T., which had closed up and appeared convalescing, was again perforated by a discharge to-day. There has been varying tenderness on neck. No nausea or vomiting. Appetite poor. A severe diarrhea last three days, which was very likely septicemic, not typhoidal.

November 18.—Pulse and temperature again down to about normal, but still stiffness, with some soreness over the jugular vein. No cording.

On account of the extreme hysterical condition of the patient, and since up to that time cases of otitic septicemia had not become familiar, the diagnosis was not arrived at until this time.

Lest there should be malaria, the blood was examined. No plasmodiae at any time found, but there was, however, marked leucocytosis. The

first examination at entrance showed 4,000,000 red, 48,000 white corpuscles to the cubic millimeter. Examination now shows 4,000,000 red, 50,000 white.

There was no optic neuritis and the cerebral symptoms, if mild delirium at the height of the temperature could be called such, were obscure and doubtful from her extremely neurotic condition.

November 20.—Operation (in the presence of Drs. Cheever, Post, Watson, Cushing, Bullard and others).

Ether being administered, the old Wilde's incision was reopened and prolonged so as to be about two inches long. At about one-third the distance from the tip of the mastoid another was made backward, of about the same length. The periosteum was easily removed from the bone, resisting here and there but slightly; the bone found smooth and shiny. It was notable that dark, venous blood exuded copiously from numerous points. With gouge and mallet the rather thin white cortex was removed for a space of two centimeters in diameter, disclosing a pneumatic mastoid, in which the spaces were of average size and filled with thickened,very vascular mucous membrane, with here and there a purulent mass occupying the centre of the spaces. In the upper part of the cavity the here rather friable trabeculae were removed with slight force, the antrum opened and a curved director passed easily through the aditus. Here was found but very little pus. The lower part of the cavity was cleaned out with a small gouge, the trabeculae being more resistant. The bone was removed backward, including the inner wall of the mastoid, and the sinus exposed for a space of 2.5 by 1 c. m.

The membranous surface was rough, grayish and opaque, firm to pressure and not pulsating. With a probe downward and backward, separating the dura from the bone, a cavity was opened, from which flowed half a drachm or more of thin, clear, non-odorous sero-pus. The bony wall was further removed with rongeur forceps, until an opening into the sinus was found into which a probe was passed, meeting the resistance of the thrombus itself. The inner bony mastoid wall did not appear to be much roughened. The epidural abscess cavity was explored with a probe. To make assurance sure, a sterilized hypodermic needle was now thrust through the sinus wall, downward toward the jugular bulb, and upward toward the transverse sinus, and no fluid blood could be withdrawn. The sinus wall was therefore split through the whole exposed portion at its most prominent part, and a firm, fibrinous, almost black clot revealed, which had a light yellowish mass at its centre. The whole of the presenting wall of the sinus was removed with scissors, including the area around the perforation through its wall above mentioned, as was also the thrombus, a sharp spoon being used upward and downward as far as it was thought necessary, the yellow part of the thrombus being looked upon as the infected part. The emissary vein was found thrombosed. As far as could be seen the inner sinus wall was not involved. Drs. Bullard, Watson and Cushing then agreeing that enough had been done, the entire wound was washed with corrosive solution 1-5000, and packed with iodoform gauze, hemorrhage having ceased.

Pulse at the beginning and end of the operation 120, although it was said to have fallen to 90 during it.

November 27. (Seven days after operation.)—Serious symptoms have abated and patient has been very comfortable until to-day, when slight headache is complained of. No nausea. No vomiting. Examination of eyes shows both fundi normal.

November 28.—Very comfortable. Examination of blood shows 4,500,000 red, 10,000 white, the latter being diminished from 50,000 two days before the operation.

December 1.—Has slept well and has been gaining in strength and appetite. To-day complains of general pain all over body; and temperature, which has been slowly rising for seven days, rises above 103 degrees. No eye symptoms, but neck is somewhat sore and stiff, but not markedly swollen.

Phenacetin (grains 10) was given, and pain was relieved and temperature fell to 99 degrees at 9 P. M. During afternoon complained of severe pain in head; not controlled by phenacetin.

December 4.—Patient grew rapidly worse, and at 12 o'clock at night was semi-comatose. Seen by Dr. Bullard this morning, who advised trephining of middle and cerebellar fossae.

The patient being partly unconscious a small amount of ether was given. The granulations were removed from the old wound, and dark blood rushed in from all sides; this was profuse and lasted for some time. There were no bleeding points. The middle and posterior fossae were now opened, the dura in the former appearing normal; in the latter, however, it was tense and projected into the trephine opening. No pulsation. Puncture let out a drachm of fluid. A trocar was passed into cerebellum; no pus found. After operation patient remained unconscious, and pulse was 180.

December 5—Exitus lethalis 1 P. M. (Fifteen days after the operation.)

AUTOPSY.

Austopsy by Dr. Mallory, 22 hours after death.

(Essentials only given.)

Removal of dura mater; present beneath pia of left side an exudation which was nearly serous, but showing whitish or grayish lines of fibrin slightly clouding it.

On right side exudation more marked and yellow. Some of the veins running along the fissure of Rolando filled with thick yellow pus, easily squeezed from the lumen; exudation particularly thick along the course of these veins into the pia. On removal of brain, sero-fibrino-purulent exudation covered cerebellum, pons and medulla. On right side of cerebellum was a smal perforation, extending 2 c. m. into it, to the centre of the lobe. On section this tract showed slight hemorrhage, but no sign of purulent infiltration.

(The openings through the dura and skull are here described.)

In the neighborhood of these openings there seemed to be the greatest amount of suppuration, and the dura was slightly adherent to the bone. Above and below mastoid opening the sinus was occluded by a small, yellowish, dense thrombus, firmly adherent to the wall; no evidence of suppuration in it, and it did not extend further than the torcular Herophili. This thrombus was apparently quite old and extended as far as the jugular foramen. The jugular vein had thickened walls and was filled with thick yellow pus; below this abscess it was apparently obliterated by the thrombus, the extent of which was not determined. The longitudinal sinus was free. In the left lateral sinus, at the entrance of the vein from the mastoid region, was a small, old papillary thrombus, one centimetre long by three millimetres in bredth and height.

No signs of suppuration in external or middle ear of right side. On section of bones mastoid cells apparently entirely removed by operation. Brain substance showed numerous blood vessels injected; slight increase of fluid in ventricles. Large vessels at the base normal. Other organs examined, but not pertinent to subject under consideration.

Anatomical diagnosis—Thrombosis with organization, and obliteration of right lateral sinus. Purulent softening of thrombus in beginning of right internal jugular. Small, old, adherent thrombus in left lateral sinus. Acute sero-fibrino-purulent meningitis. Old tuberculosis in the apices of the lungs.

Bacteriological—Streptococci in lateral sinus, and in pus of pia mater of both sides, and around cerebellum, numerous in colonies and chains, a few in longitudinal sinus. The blood, heart, spleen and liver were sterile; the kidneys contained colonies of colon bacilli and streptococci.

In this case it is to be noted that there was a streptococcus infection which had its most intense expression not in the sigmoid sinus itself, but in and below the jugular bulb, and that the meningeal infection seemed to be in a backing up from this reservoir; that the thrombus below the abscess had completely shut

off the jugular, so that there was no systemic pyemic infection, and simple ligature of the jugular would have been of no service; that the unusual and perhaps hitherto unnoted condition of a thrombus in the opposite sigmoid sinus, without disease of the corresponding ear, might have precluded recovery; but that if the right vein had been ligated and cut off, and then irrigated upward through the sinus so as to wash out everything, as was done by Ballance, as mentioned by Dr. Adams, it might have saved life.

Case 2.—H. O. L., a boy of 8 years of age, was seen on February 17, 1897, in consultation with Dr. Twitchell, of Dorchester.

Up to a year and a half of age had been a strong, vigorous, plump child; since that time has been troubled with intestinal indigestion, and has been rather weak and puny; is even said to have had marasmus. Had chicken pox some weeks ago, which was followed on January 24 by an attack of measles, which was described as severe by the mother.

There was considerable inflammation of the mucous membranes, as shown by a croupy cough on the 27th.

February 1.—Earache on the right side, with tenderness of the scalp. Rupture of drumhead and discharge on the 3d. Pain remained severe for about a week and patient became much reduced. On the 9th there was more or less relief from pain and almost total cessation of discharge. On the 11th increase of pain on the right side of head. On the 12th patient suffered from a very severe exacerbation of earache, with tenderness and pain over mastoid region and somewhat behind it, followed by rather copious bloody discharge from the external canal. Cellulitis of considerable extent under the mastoid and behind the jaw, pain radiating down the neck. At this time he had also what was evidently a slight chill, but not a distinct rigor, and was found by his physician "almost collapsed." The chill was followed by fever, and this by a marked sweat. The bloody discharge is reported by the mother as having nearly ceased on the 14th, but as having increased on the evening of the next day. There was marked anorexia, with an anxious, suffering expression of countenance, more or less paleness and restlessness at night. Eyebrows corrugated This restlessness was marked from the first earache, somewhat relieved after the first rupture, but increased since the chill and the bloody discharge. At no time was the temperature found above 100 degrees F., although this was taken irregularly at the doctor's visits. There was only one more chill reported up to the present date, only, however, after very careful questioning.

Examination.—Right side of neck very much swollen two-thirds of the way to the clavicle; swelling in general diffuse, with a few nodular masses—glands; tenderness down the course of the internal jugular; mastoid not swollen, red, nor changed in contour; no edema; marked tenderness just under the meatus, in front, around the tip; tenderness over the emissary vein and posterior to and above it; slightly tender over the antrum. External meatus normal in size. M. T. bulging through its whole extent; umbo shows as a depression; dull, pale slate color; rather bluer than normal; no perforation. No light reflexes. In posterior wall of canal, about one-eighth inch from M. T., are two or three granulations, evidently marking the site of a fistula drop from the mastoid cells into the external meatus, through which exudes a very copious discharge of a reddish, purulent material, a part of the cotton wick being soaked wholly with blood. Meatus wiped out thoroughly, rapidly fills again.

Eyes not abnormal. No signs of paralysis. Temperature, 98 degrees F. Pulse of good strength, not over rapid, but as the child is nervously agitated is not not counted. Passed a more comfortable night last night than previously.

Diagnosis.—Acute mastoiditis, with probable thrombosis of the lateral sinus and epidural abscess.

Operation advised immediately.

February 18.—Patient being quite weak, was given an enema, three ounces, consisting of peptonized beef

juice and wiskey, about 10.30 o'clock. At 12.30 ether was started. Child brought to the table; the cotton removed from the ear, and then the act of coughing with some little crying caused a copious, reddish, creamy discharge to well out of the ear, so as to fill the external meatus and the depressions of the auricle; wiped out, soon filled up again; no odor. Long incision made through the posterior segment of the M. T.; copious bloody discharge; if any pus was present it was masked by the blood.

Mastoid operation.—The usual incision was made; periosteum stripped from the bone; very many bleeding points through rather bluish cortex, suggesting a passively congested bone. The outer table of the process was removed with gouge and mallet, and a channel chiseled into the antrum, around which the bone, of diploetic quality, was found very friable; hemorrhage very copious, hindering the operation considerably and masking the pus if any was present.

The chiseling was carried backward and, a small piece of the bony inner wall of the mastoid being elevated, a serous, non-odorous, turbid discharge of 30-40 minims welled out. This was probably the emptying of the epidural abscess, which was small. The bone was chiseled away from the sigmoid sinus from its junction with the transverse or horizontal sinus to the jugular bulb. No pulsation to be seen or felt; sinus somewhat distended; wall had not the clear blue appearance usually found, but mottled; evidently had dark, grayish interior, not soft, as if filled with blood, but much harder to the finger. At the apex of its upward curve was a dark, soft spot.

The inner wall of the skull was rough in this vicinity, and the vascular bone was all taken away until the probe would not pass beyond the wall of the epidural abscess. A sterilized needle was used to puncture the sinus obliquely; no pus nor blood aspirated. With a bistoury an opening in the sinus was made three-fourths inch in length, slowly and with great care; interior was found plugged with a dull-colored fibrinous clot. The lips of the wound were held open with forceps, and the clot removed piece by piece; upward until there was a considerable flow of venous blood; downward in search of the septic part, when, after removing several pieces, deep down and forward, apparently in the bulb itself, there was a gush of pus. A bent probe was passed down through the bulb into the jugular vein, when considerable pus welled up.

The probe was used to detach fragments from the interior of the vein, which were removed by forceps. Pus clear, yellow, creamy, with slightly thickened masses, came up in considerable quantities; pressure on the neck upwards caused it to well up in considerable amounts—estimated two drachms.

Iodoform gauze wicks were thrust down for one and one-fourth inches from the opening, which was slightly lower than the top of the bulb. The parts were thoroughly irrigated with a 1 to 4000 or 5000 corrosive solution; thoroughly wiped out; a long wick thrust down the jugular vein, and another one into the top of the incision through the vessel; another one into the aditus and antrum; another into the external meatus.

The bony wall of the meatus posteriorly was slightly roughened; this was scraped and a part removed with forceps. Iodoform compress applied, followed by sterilized gauze and bandage.

Patient came out of ether very well. Pulse remained good throughout, and the color of the face was apparently better after the operation than before.

February 22d, Patient has had an erratic temperature—see chart. Feels perfectly well; complains only of hunger. No pain except at the left sterno-clavicular articulation which is the seat of a pale, very sensitive swelling, not oedematous, too tender to press for pitting; no redness around wound, swelling of the neck entirely disappeared.

First dressing—On removal of the wick from the sinus opening, a watery pus follows and considerable can be squeezed out by pressure on the neck under the ear. The probe does not pass so far down as before. Packed and again well covered; slight

amount of discharge from the ear. Wound very clean, granulating rapidly. (The day after the operation, the dressing, having soaked through, was partly changed.) Temperature 105.2 degrees at 8 P. M.; last night at 8 o'clock temperature 104.6 degrees—perhaps caused by removing patient to operating room and back again.

February 24th.—Patient has been very comfortable; sleeps well; takes nourishment well; no disturbance of stomach or bowels; no headache, no pain anywhere, except slight at the swelling above and to the left of the sternum, which has extended somewhat upward and outward. It is a question whether this was a cellulitis from involvement of the joint, or an angio-neurotic edema. There was no other similar swelling or other evidence of metastasis anywhere.

At the dressing to-day a larger amount of pus was pressed from jugular than two days ago, of thicker consistency, and a curved probe was passed downward about one and one-half inches from the opening, the sinus wound having partly closed. Dressing was done in bed without disturbance.

There was noted to-day a slight increase of swelling in anterior cervical triangle, but no cording of internal jugular and no tender spots in its course. External jugular markedly increased in size.

February 28th.—Dressed every other day. Swelling above sternum was gone on 25th, and to-day no pus in sinus and none can be pressed from jugular.

March 5th.—Wound nearly granulated in, and there is almost no pus. Sat up one-half hour to-day. Temperature has been practically normal since evening of 24th ult.

March 13th.—Cocoon applied to wound, and patient returns home. Has been growing stronger, and is up and about, but gait still unsteady.

March 26th.—Wound entirely healed. Third cocoon removed and patient dismissed. Politzer's acoumetre and whispered numbers heard readily more than twenty feet.

CEREBRAL LOCALIZATION—IS THERE SUCH A THING?

One would suppose by a casual glance only through many of our latest text-books, and some of the rather overdrawn descriptions of operations over the cranio-cephalic area, that cerebral localization had come to be regarded as one of the fixed doctrines of medical science.

The writer three years ago demonstrated in the report of more than 100 cases of fracture of the skull, attended with more or less brain damage, that there was practically nothing found to support the doctrine of cerebral localization; on the contrary, the cerebral manifestations bore so little relation to the site of injury as to stamp it another of the modern fallacies and delusions, certainly as far as cephalic traumatisms were concerned, though it was hoped that it might hold good for pathologic conditions. But at Moscow, in the extended discussion bestowed on brain surgery, it was quite the general concensus of opinion that symptomatology was not to be depended on as a guide to locating cerebral lesions. For example, it was stated that in about one case in ten pointing to a tumor, one was found, and in the other nine it was absent.

When the growth advanced toward the periphery of the vault or base and pressed on the meniages or nerve-roots, its lodgment might be traced.

This would go to prove that cerebral localization, the physic diagnosis of intracranial lesions, has not developed into anything which will stand comparison with that, quite efficient and definite in lesions involding the viscera of the thorax or abdomen.

OLD WINE IN NEW BOTTLES.

In last issue we invited the attention of our readers to a few phases of the fracture question, and showed that from complicated mechanical appliances we have returned to the practically do-nothing policy; or do something that 20 years ago would promptly put the operator—perpetrator—behind the bars.

Please note the latest from the Moscow Congress on this head, and ponder whether we lately overdrew the picture and whether events of the past for the cumbersome, useless, complicated adjustments, filling whole books to describe, have not most emphatically spelled out "failure."

*"The old principle that fractures must be immediately immobilized and then kept absolutely quiet until the healing process is completed received some serious blows. Dr. Lucas Championniere, of Paris, has been treating all fractures for years without apparatus and with immediate massage and passive movements. He has obtained particularly satisfactory results in fractures of the upper and lower end of the humerus. those about the elbow and in fractures of the clavicle—the fractures for which the most varied apparatus have been invented, the greatest care in absolute immobilization taken and in which, notwithstanding it all, the results have, as a rule, been anything but satisfactory. Dr. Championniere and his ideas were confirmed by others who use only the simplest forms of temporary bandage. By this treatment Dr. Championniere has obtained in the short period of three weeks solid union without noticeable deformity.

"Some of the best Roentgen-ray pictures of the hand exhibited in the surgical section of the Congress were taken without the use of a Ruhmkorff coil. An ordinary two-plate Wimshurst static electric machine, with a Leyden jar in the circuit, had been used to produce the X-rays. The result was so good that some of the histologic details of the bones were clearly developed. With slight changes the same means may be used for a radioscopic work, and it would seem as though some simpler and less expensive, also less technical, means of producing these now so valued pictures may result from further experimentation."

But M. Championniere should be candid and as his surname is Justin, be just, for we more than three years ago, in a contribution on the "Influence of the Circulation in Fracture," showed both by experiment on the living animal and clinic observations on the human being, that early and rigid fixation was a mistake. the frog's webbing, the turtle's vessels and the delicate tissues of the kitten that for the great preponderance of fractures the best prothetic apparatus for the average fracture was none at all.

Something more than one year later, at Atlanta, we again re-echoed the same sentiments with greater emphasis as applying to juvenile fracture.

"Boiled down" the milk of the cocoanut is simply this: Discard absolutely in the preliminary dressings every kind of fixation which may embarass the circulation. Festina lente; hurry not about setting for some days, if necessary, with rigid fixtures, and, of all things, cautiously and easily put the muscles and joints into action.

*Letter to Medical News, Sept. 25, '97.

Book Reviews.

THE AMERICAN ACADEMY OF RAILWAY SURGEONS. Report of third annual meeting, Chicago, September, 1896. Edited by R. Harvey Reed, M. D., Columbus, O.

This little volume is the transactions of the Academy at its third annual session, and contains the reports of the Association and some very valuable papers on railway surgery.

ABOUT CHILDREN. Six Lectures given to the Nurses in the Training School of the Cleveland General Hospital in February, 1896. By Samuel W. Kelley, M. D., Professor of Diseases of Children in the Cleveland College of Physicians and Surgeons (Med. Dept. Ohio Wesleyan Univ.), Editor Cleveland Medical Gazette. 180 pages. Price, in buckram, postpaid, $1.25. Cleveland: The Medical Gazette Publishing Company, 1897.

Dr. Kelley has given in these lectures some very practical points in the nursing of children, which it would be well for not only nurses, but physicians and mothers to bear in mind. The first lecture is devoted to the early infancy nursing and especially contains good points on infant feeding. The second lecture is about the child in health, and the third the child in pathological conditions. Lecture four treats of the symptoms of various diseases and their indications. Lecture five the nursing and management of sick children, while lecture six is devoted to artificial feeding and sterilization.

PRINCIPLES OF MEDICINE. By Charles S. Mack, M. D., Chicago. Published by The W. T. Keener Co., 96 Washington street, Chicago. Price, $1.00.

In this little book the author tries to prove that the only principles of medicine are those of the homoeopathic school, viz., similia similibus curantur, and that this is "a law of nature." He discusses the arguments now brought against homoeopathy and tries to smooth over the discrepancies as practised by the present school of homoeopathy and that established by Hahnemann. Suffice it to say that he has not yet converted us or made the homoeopathic fallacies appear any clearer than before as proving the truth.

ILLUSTRATED SKIN DISEASES: An Atlas and Text Book, with Special Reference to Modern Diagnosis and the Most Approved Methods of Treatment. By William S. Gottheil, M. D. New York: E. B. Treat & Co., Publishers, 241-243 W. 23d street. Price, $1. Portfolio. Copyright, 1897, by E. B. Treat & Co.

The issue of the above work marks an epoch in American dermatology.

Many of its most striking and unique features are entirely original.

There have come to our hands as yet but four portfolios, and hence it will be impossible at this date to consider the whole scope of a work one-fourth of which only is yet published.

There are two prominent features in this superb work, which even the casual reader must note, running all the way through it, and those are the ones which give it its great practical value. The arrangement of the subject-matter is simple—like the text—brief and clear. With this is a copious and accurate photographic illustration on colored plates of the various cutaneous lesions.

Of late years dermatology has sustained a great impetus through bacteriologic science; an immense flood of light has been let in on many dermal eruptions hitherto imperfectly understood. Gottheil devotes ample space to this important class.

His etiologic classification and his

broad, rational therapy will strike the experienced practitioner as of special value.

Heretofore Americans have had to depend chiefly on European sources for anything like comprehensive atlases and text-books on dermatology, besides, their great expense prohibited their general purchase.

Professor Senn in his matchless oration at Philadelphia dwelt with special force on the importance of encouragement to our own authors; and "literary independence in our profession in America." This is as it should be, provided the home article is of equal merit to the imported; and no one will lay down this volume, who has carefully perused it, without conviction that the author has done his work well. It certainly is one of those productions which has come to stay for some considerable time as the best exponent of the subject it deals with; besides, its low price places it within the reach of all.

The publishers part has been well performed. The text is large and clear, the paper thick and heavy, the colored photo lithographs singularly clear and natural.

--- Electro-Therapeutics ---

DR. S H. MONELL, Brooklyn, N. Y., Editor.

Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

ELECTRICITY AS APPLIED TO MEDICINE AND SURGERY.*

The discoveries, inventions and developments in electricity which the last twenty years have brought forth have naturally given electro-therapeutics an impetus that bids fair to make it the most versatile and at the same time the most positive curative agent known to humanity, and I hope the time may soon come when every member of our profession will be prepared to use this agent with a full understanding of its scope and action.

It is unquestionably true that in order to manipulate the electrical current some preparation and study is necessary, and I regret that this should be one of the reasons that prevents physicians from using it. However, the difficulty is not as great as many imagine, and with judicious reading and some practical instruction this obstacle may be overcome by any physician desirous of adding this powerful curative agent to his equipment. There are several text books which give all the necessary information on electro-physics, electro-physiology and electro-therapy in a concise manner, and these being thoroughly understood the handling of the apparatus and the scientific application of electricity can be easily learned.

Another objection to the more general use of electricity is the expense of an installation. There certainly are a great variety of instruments in the market, some very elaborate and ornamental, others more simple, but all more or less expensive. There being a limited demand as yet for medical electrical apparatus it is natural that manufacturers should have to charge apparently exorbitant prices, but when the demand in-

*Read before the Fairfield County Medical Society, October 13, 1896.

creases, competition will arise and prices will be reduced. Experience has taught me that the simplest and least complicated apparatus is always the best, and if the essential features for scientific accuracy are present the appearance of the instrument is of little consequence.

It is not the purpose of this paper to go into a detailed description of all the different forms of batteries and other generators of electricity, but I shall confine myself to an enumeration of the different forms of the agent that can be used in our work as physicians or surgeons.

There are four principal currents, subdivisible according to the method of application. They are:

1. The galvanic current.
2. The faradic current.
3. The static current.
4. The sinusoidal or alternating current.

Each one of these is possessed of different physical and therapeutic properties, and it is on a judicious selection of the form of current in each case, where the use of electricity is indicated, that success in electro-therapy depends.

Following are the usual terms employed in medical electricity:

Amperage, means the volume of current.

Voltage expresses the speed or pressure.

Ohm represents the unit of resistance to be overcome by the current.

We will now briefly consider the different currents and their characteristics and will begin with galvanism.

The galvanic current used in medicine is of low voltage but high amperage, comparatively. It can be best generated from a number of cells of the Leclanche type on account of their durability; from 40 to 50 of these cells are necessary. The bichromate of potassium cell is also used, but becomes exhausted much sooner than the first named.

The galvanic or direct current flows steadily and always in the same direction, from positive to negative. Its action is principally chemical, but in a small degree mechanical. It does not produce shocks or muscular contractions except when interrupted or in opening and closing the circuit. In flowing through the tissues the galvanic current acts principally on the liquids contained therein, decomposing them and breaking up the atomic combination and rearranging them, hydrogen and the alkalies going to the negative pole, while oxygen and the acids collect at the positive. Besides this chemical action the galvanic current is a stimulant to the circulation of blood and lymph. Furthermore the positive pole has a sedative action on the sensory nerves, while the negative pole produces hyperesthesia. Another property of the current is its ability to carry substances with it through the tissues, and this is called cataphoresis.

These different actions of the galvanic current are made use of to remove exudations, swellings or congestion, to increase nutrition of all the tissues, nerves included, to stimulate absorption and to assist disassimilation. The sedative property of the positive pole may be applied to relieve neuralgia and all pains caused by local irritation.

Cataphoresis enables us to introduce substances into the tissues in order to bring about certain effects—for instance, cocaine to produce anesthesia.

The electrolytic or decomposing property of the current, which is strongest at the poles, may be taken advantage of to generate certain localized chemical action.

The negative pole, as stated above, gathers about it hydrogen and alkalies; these latter have a softening influence on the tissues with which they come in contact.

It is on this principle that electrolysis of urethral strictures is based, the negative pole, consisting of a metallic bulb on a bougie, being brought in contact with the stricture, and a mild current turned on. It will soon be noticed that the stricture yields, and after a small number of applications the stricture is removed and the patient often cured.

An operation with the knife, or dilation, is only exceptionally successful because it does not remove the hard cicatricial tissue, but only

stretches or cuts it, leaving it fully able to do more mischief later.

I consider electrolysis for urethral strictures one of the greatest triumphs of electro-therapy. This same action of the negative pole is made use of to remove hair, blemishes and small growths from any part of the body. The electrolytic effect at the positive pole consists in the accumulation of oxygen and acids, the hardening of tissues and their depletion of blood. It is thus that the bleeding from the uterus may be arrested in certain forms of endometritis, as well as in cases of interstitial and submucous fibroids of that organ. If the electrode forming the positive pole is of metal the acids accumulating around it will soon attack it and salts be formed; for example, in a case of a copper electrode, the oxychloride of copper will appear, or with a zinc electrode the oxychloride of zinc will be evolved. These salts are not only in contact with the tissues, but by cataphoric action are driven into them to a certain depth, producing their specific effects. This is called metallic electrolysis.

The galvanic current is also used to ascertain the reaction of certain nerves of the body to the opening and closing of the galvanic current flow, and according to certain established facts and rules it can be seen whether the nerves are in a healthy state or not. In this way is discovered the so-called reaction of degeneration.

The faradic or induced current has a small amperage, but a more or less high tension, which varies according to the secondary coil employed. It is probable that this current has but a very small chemical action, but it is a powerful stimulant to the nerves, muscles and blood vessels. If the secondary coil is of heavy wire of moderate length the current produced is stimulating, even irritating, and if applied to a painful spot will increase the pain. It is principally used to relieve muscular atrophy, peripheral paralysis, malnutrition of the parts and under-development.

In gynecology long coil currents are found useful in cases of dysmenorrhea, caused by lack of tone and immaturity of the uterus and ovaries, and also in hyperinvolution.

The faradic or induced current from a coil of fine wire of great length has a sedative action. It is generally employed to relieve deep-seated pains, such as ovaralgia and general neuralgia. There is no limit to its uses for the relief of pain, and it is one of the most trustworthy, as well as most harmless, remedies existing.

The sinusoidal or high tension alternating current has not been used for a sufficiently long time to enable one to fully form an idea of its scope as a therapeutic agent; it is generally employed for its sedative effect, and as its application is almost entirely devoid of pain many use it in preference to the long and fine wire faradic coil.

We now come to the static current, which has an enormous voltage, but only an infinitesimal amperage. Its uses are manifold.

The principal effect of a static current is stimulation. It is a powerful agent for the increase of capillary circulation, and it stimulates the functions of the skin, as can be readily seen during an application of this current, when perspiration becomes quite abundant. In neurasthenia and general debility its action seems most marked, and in chronic muscular rheumatism, also, it is of unquestionable value.

There are a great variety of diseases in which electricity in one form or another will prove of the greatest value, and those who have sufficiently interested themselves have at their command a means of giving quick relief and permanent benefit.

However, electricity is not a panacea for all ills, and the cases to be treated should be carefully selected. Nor is it just that all chronic cases in which about every known remedy has been tried in vain, should be thrown on electricity, and then if that agent fails to perform a wonder to decry it as of no use and of no account.

For electro-cautery work a battery of large amperage and very low voltage is required. By the aid of

this instrument it is possible to remove portions of soft tissue without the loss of blood. It is very useful in surgery of the nose and throat, and in all instances where a cautery can be used.

A few words about electricity for diagnostic purposes. The small incandescent light has been used to illuminate the cavities of the body, such as the nose, pharynx, larynx, ear, stomach, rectum, vagina, bladder, etc. Powerful electric light has also been used for translumination.

The latest and most wonderful addition in this line is unquestionably the X-ray, discovered early this year by Professor Roentgen, of Wurzburg. With the aid of these rays it is possible to obtain a clear outline of organs and structures of our body, otherwise absolutely invisible, and it is hardly worth while to call attention to the marvelous possibilities opened to us by this discovery, which is as yet only in its infancy.

We are at present able to find foreign bodies imbedded in the tissues, such as fragments of glass, needles, bullets, etc., by the aid of the X-rays. It is also an easy matter to determine any abnormalities in the bony structure of the body; we can see the heart and its movements, as well as the liver and other opaque organs. In case of fracture we can by means of the X-rays determine the extent of the displacement, and after the reduction of the latter it is an easy matter to see through bandages and determine whether the fragments of bone are in proper position for union or not. Dislocations of joints can be clearly seen, and proper treatment instituted. In anchylosis of joints it is possible to determine whether the offending overgrowth of tissue is of bony or soft structure. Diseases of bone, such as tuberculosis or cancer, can be detected, and the extent of the disease ascertained.

These are some of the principal uses of electricity in our work, and although I realize that justice cannot be done to the subject in a brief paper like this, if I have succeeded in interesting some of you I shall feel that my purpose has been accomplished.

—Frederick Schavoir.

Clinical Medicine.

In charge of Dr. J. J. Morrissey.

PRACTICAL SUGGESTIONS IN THE MANAGEMENT OF DYSPEPSIA.

J. J. MORRISSEY, A. M., M. D.,
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Visiting Physician to St. Joseph's Hospital.

The prevalence of indigestion among American business men has been so largely on the increase that it is assumed by foreigners to be a characteristic accompaniment of success. There is a great deal of truth in this assumption, inasmuch as we regard our system as a perfect piece of machinery, which is wound up every morning and guaranteed to run for so many hours without friction. During the day, as a sort of a bribe, we hurry to a "quick lunch" restaurant and eat a sandwich with a rapidity that is wonderful to contemplate, follow it with apple pie,

drink a cup of coffee and then hurry back to business. The stomach at first adjusts itself to the extraordinary demands made upon it in consequence of the indigestible sandwich and the late dinner seasoned with piquant sauces and pungent condiments, and like the patient camel carries burdens it was never prepared to bear, but in time it rebels and the day of reckoning arrives. Then business is forgotten, the various spas are visited, years are passed striving to regain what the exercise of a little common sense would have prevented.

The dyspeptic is a naturally irritable person, spare, generally carrying upon his features the impressions of his hard-fought battles, and constantly complaining of indigestion, acidity and flatulence.

He is generally somewhat melancholy in his temperament, and a hypochondriac in disposition. He has cold hands and feet, is constipated, and the capillary congestion of his face indicates a cirrhotic process going on in the liver. He is easily "winded," and complains of the frequency with which he arises at night or very early in the morning to pass urine. His pulse is hard and tense, and on examination the heart will be found to have a large, left ventricle and an accelerated second sound, presenting in a word the phenomena and sequelae of an interstitial nephritis. Unfortunately for the individual so afflicted the latter process may follow an insidious course for years without attracting the attention of the patient. It is only when some intercurrent malady compels him to consult a physician that he is made aware that his cephalalgia, his frequent urination, his perturbed spirits, his irascible demeanor, all point to the contracted kidney and the non-elimination of toxins as their causative factor.

It cannot, therefore, be too seriously insisted upon that when a patient presents himself or herself—but women are more apt to suffer from the various forms of intestinal indigestion—with the symptoms of aggravated dyspepsia, the closest examination of the heart and kidneys should be made. Not a mere perfunctory examination, unsatisfactory alike to the patient and the physician, but a thorough overhauling of the entire system, especially the two organs whose associations are so intimately connected as the heart and kidneys. The accentuated aortic second sound, the cirrhosis of the liver, the shrinking kidney, these are all sequelae of one cause, prolonged high arterial tension. The latter, independent of organic disease of the heart and kidneys, appears to be due to sedentary occupation and excessive eating and drinking. These lead to defective assimilation and elimination, and also to the probable development of toxines in the circulation which have an inhibitory and irritating effect upon the arteries.

A vicious circle is thus produced that embraces within the area of its circumference the entire system. The circulation being impeded, there is a gratuitous hypertrophy of the left ventricle produced. If at this time the patient is warned of his condition and obediently follows out the strict injunctions of the physician his distress may be considerably abated, but if he pursues the tenor of his way, the waste-laden condition of his blood will lead to increased arteriole spasm, the circulation will become correspondingly obstructed and ventricular failure must follow as an inevitable consequence.

It is a well-known fact that hypertrophy may be maintained for years if the muscular tissue of the heart is healthy, and if it receives a sufficient supply of healthy arterial blood, but the latter cannot be maintained if it is laden with waste products, generated in the alimentary tract, and followed by the toxines, which have such an irritating effect upon the nerves of the heart.

This is commonly the history of the dyspeptic individual, who has broken down his health in order that he may accumulate a fortune, most of which is afterward expended in striving to regain what he has irretrievably lost. Frequently afflicted in mind, for he is distinctly "neurotic" in his composition, overworked in body, he often ends his busy career by resorting to the coward's

panacea, suicide. Such people are generally excellent workers. They are never so contented as when formulating and executing great schemes. For them idleness possesses no attraction; on the contrary, the higher the pressure the greater the contentment, but when the final crash comes they find themselves walking on the edge of a precipice.

These cases demand our most serious consideration. In the first place a strict system of diet must be ordered, and the consequences of its evasion pointed out in the most decided manner. They are not generally at this period large meat eaters, for meat appears to increase the uric acid in their systems and the production of the latter interferes with the solvent properties of the gastric juice. The food of the patriarchs, "corn and wine and oil," is best suited for their limited powers of digestion. Fruit is allowable, and fish, though at times the latter seems to increase the sense of pressure at the "pit of the stomach," from which they so loudly complain. Milk, too, taken warm and slowly sipped, may be indulged in, even by those who assert they never can take milk without curdling. If the dyspeptic will take from twenty minutes to half an hour to drink a glass of milk he will generally have no difficulty. In a great many of those "neurotic" dyspepsias the liver seems to be "insufficient" to properly perform its functions, and requires the therapeutical assistance of mercury at night, followed by a seidlitz powder in the morning. If the stools are tarry a small quantity of podophyllin is very effective. Sometimes phosphate of soda in a glass of warm, yes, hot, water has a remarkable effect in relieving the pain from which this class suffer.

It is quite wonderful to witness the exhilaration that frequently follows in the morning the night administration of a blue pill, plainly indicating what an important factor in the internal economy is the much abused liver. Lord Byron found Epsom salts the best means of dissipating the fogs of despair, but in this regard every patient is a law unto himself, and must be judged from an individual standard.

For the lithiasis which usually accompanies this dyspeptic neurosis, lithia is excellent, and in many cases Cantani's alkaline powder composed of soda bicarb, carb. lithium, and citrat. potash is quite effective. As we have observed above, we again wish to emphatically assert that each case must be carefully considered on its own individual merits. Some do not bear potash well at all; soda phosphate is their laxative.; others are attached to Carlsbad salts.

The routine treatment of indigestion by the various preparations of pepsins, pancreatins, malt extracts, etc., etc., cannot be too strongly condemned. Their use is frequently a tacit admission on the physician's part of his ignorance of prevailing conditions. Not that they should be absolutely condemned, far from it; they have their uses very accurately defined, but their field of activity is exceedingly limited. Brilliant experiments in the laboratory carried to a victorious termination are not always successful at the bedside, for clinical experience has proven again and again that the human system cannot be converted into a retort for every species of chemical elaboration. As an example we may mention one of the ingredients of Cantani's powder which we have mentioned, namely carbonate of lithium. It ordinarily forms with uric acid the most soluble compound. Taken internally it appears in the urine in combination with chlorine, as the chloride of lithium, a most insoluble substance.

The cold bath in the morning when used judiciously cannot be too highly recommended in suitable cases. It should be followed by brisk rubbing with a coarse towel, and supplemented with easy exercise. For those who are afflicted with insomnia, the hot bath at bedtime is conducive to a good night's rest. The question of exercise in these cases is all-important, and in this regard the ubiquitous bicycle cannot be too highly praised, when used moderately. On the other hand, the tendency toward "scorching" cannot be too severely con-

demned. Hard and fast riding, especially in those who have passed middle life, very frequently brings into prominence an hitherto unsuspected heart or kidney lesion, and if the kidneys be at all insufficient in action, the increased metabolism generated by the active exercise may induce an acute process to supervene upon the chronic degeneration, manifesting itself by the presence of blood, casts and increased albumen. None of these sequelae need be feared when the bicycle is used under a physician's advice, and the latter strictly followed. The class of people which the bicycle would benefit most are those whom it usually injures, as they do not use, but abuse, this excellent machine; that is, those of sedentary occupations, and who have passed the meridian of life. There is no form of exercise, it may be asserted, that will so quickly reduce the chronic cerebral congestion of brain workers. It rouses the dormant energies of the fatigued intellect, it dissipates the lassitude following continued mental labor, it increases the oxygenating capacity of the individual, and all his vital processes are awakened into renewed activity. The circulation of the blood is more rapid and, what is of greater consequence, its oxygen carrying power is increased, so that every portion of the system throbs with the joy of physical well-being. But here a note of warning must be given. To those afflicted with weakness of the walls of the heart, and especially where fatty degeneration exists, the bicycle becomes an easy method of suicide. It is those cases which furnish the daily press with the sudden deaths after a hard ride, foolishly undertaken at the expense of life. As to the digestive organs, they, too, share in the generally increased functional activity of the internal system. A richer blood supply imparts renewed energy to the gastric juice and the latter is better prepared to meet the heavy demands made by the increased appetite of the rider.

Thus the whole system undergoes an awakening of its latent activities and each organ shares in the benefits accruing from moderate bicycle riding.

Current Medical Literature.

SIMPLE OBESITY.

Thyroid feeding has lately become one of the most popular methods of treating obesity. Extensive clinical observations have shown that considerable reduction in weight can be secured under this treatment without subjecting patients to the annoyance of a radical change of diet. It is true that unpleasant and even serious symptoms have been observed after the administration of thyroid extracts, and these have been attributed to the presence of toxic decomposition products. By the employment if iodothyrine on the active principle of the gland these unfavorable symptoms can,however, be practically obviated. Dr. Lutaud, of Paris, who has used iodothyrine in 17 cases of simple obesity, concludes that "this substance will, without the aid of other treatment, bring about a reduction of weight without giving rise to serious complications." In five cases there was a rapid improvement and diminution in weight after 15 days' treatment, no other medicine being employed, and in four of these the loss in weight varied from one to six kilos during this

period. In 12 other cases, in which a dry diet and purgatives were also prescribed, the average loss in weight was four kilos after 15 days' treatment. It would seem, therefore, that iodothyrine is a real acquisition to the therapeutics of obesity, and that it is a substance of definite composition, free from by-products and that its dosage can be accurately graduated, rendering it far superior to other thyroid preparations.

ON THE TREATMENT OF CYSTITIS WITH AMMONIACAL DECOMPOSITION OF THE URINE WITH UROTROPIN.

Reported from the University Medical Clinic of Gottingen.
BY PROFESSOR ARTHUR NICOLAIER, M. D.

It is now about two years since I introduced hexamethylentetramin, the combination of formaldehyde and ammonia, into therapeutics under the name of "Urotropin." I had selected this name as the result of observations which showed that when sufficiently large quantities were administered internally the drug passed unchanged into the urine, and altered it in various respects. Not only is the excretion greatly increased in quantity, but it acquires the property of solution of uric acid, without losing its acid reaction, and, at incubator temperature, the urotropin acts as a hindrance to the development of microorganisms. On the basis of these observations I used urotropin in suitable doses in the treatment of uric acid concretions and bacterial diseases of the urinary passages, and the results of these therapeutic experiments were so favorable that I determined to publish them.* Since that time I have had further experience of the successful use of urotropin and certain of its combinations in these disease conditions. These I intend to publish somewhat in detail elsewhere shortly. In the present communication I shall confine myself to a brief account of its use in cystitis with ammoniacal fermentation of the urine. Cases of cystitis where the urine remained acid, as also cases of inflammation of the bladder, consequent upon gonorrhea, were also cured with the drug, but it seemed to give the best results in cystitis with ammoniacal decomposition of the urine, and it is in this form of inflammation of the bladder that I can more especally recommend it to the practitioner.

Urotropin is a weak base, and appears as white crystals, soluble with some little difficulty in alcohol, but very readily soluble in water. An aqueous urotropin solution has a pleasant, sweetish taste, and gives an orange-yellow precipitate with bromine water, forming a bromine combination of the base. The reaction is well suited for the detection of urotropin, and is demonstrable in the urine even after small doses of the drug, showing that the drug passes unchanged into the bladder. The excretion takes but a short time; I have been able to obtain the reaction 15 minutes after administration of the remedy. After its stoppage the urine shows the bromine reaction for some time, the length of which is dependent upon the size of the dose administered. After a single daily dose of 0.5 grm. (7 1-2 grains) it was found for about 13 hours; after one grm. (15 grains) for about 27 hours after administration.

As regards the dosage of urotropin, my experience would show that daily doses of from 1.5 grm. (22 1-2 grains) should not be exceeded. For I have found that even when a single much larger dose was well borne its continued use for longer periods of time caused unpleasant by-effects in a number of cases. These consisted of a burning sensation in the vesical region, appearing usually after urination and radiating into the urethra, and occasionally, also, of frequent micturition. If, under these circumstances, the administration of larger doses of the drug is continued the symptoms increase in severity, and red blood corpuscles appear in the urinary sediment. But these symptoms soon disappear, and the

*A. Nicolaier, "On the Therapeutic Use of Urotropin" (Hexamethylentetramin), Deutsche Medizinische Wochenschrift, 1895, No. 34.

secretion quickly regains its normal character when the urotropin is stopped, or the dose of it is diminished in amount. Urotropin is not an expensive drug, and its use is rendered still cheaper by the fact that its manufacturers, the "Chemische Fabrik auf Actien" (formerly E. Schering), of Berlin, supply it to the trade in pastils of 0.5 grm. (7 1-2 grains) in original packages containing 20 pieces.

In cystitis, with ammoniacal fermentation of the urine, one pastil of 0.5 grm. (7 1-2 grains) dissolves in one-quarter liter (1-2 pint) of plain carbonated water, at ordinary temperature, should be administered three times a day, after meals, during the first two days. Its action is usually manifest by that time, and I am then in the habit of diminishing the daily dose to 1 grm. (15 grains), giving one pastil morning and night. Later on a daily dose of 0.5 grm. (7 1-2 grains) is sufficient in many cases.

In daily doses not exceeding 1 grm. (15 grains), urotropin is well borne for a long time; some patients affected with the uric acid diathesis have used it almost uninterruptedly, in doses of 1 grm. (15 grains) for one or two years, and one patient took 1.5 grm. (22 1-2 grains) daily for almost nine months continuously without trouble. It is especially noticeable that I have never seen any disagreeable symptoms in the gastro-intestinal tract from its use.

Under the influence of urotropin there very rapidly occurs a marked change in the composition of the urine in these cases of cystitis, with ammoniacal decomposition. First, the ammoniacal smell of the freshly voided urine diminishes in intensity and soon entirely disappears. Then the reaction, not only of the fresh urine, but also of the entire daily quantity, becomes acid again. The urine becomes clearer, the triple phosphate and urate of ammonia crystals disappear, and the serious troubles, so frequently caused by the abnormal constitution of the urine, cease. The amount of pus corpuscles also diminishes; these structures may entirely disappear, but more frequently they persist, though in diminished quantity, for a considerable time.

I desire to call especial attention to the fact that urotropin, in the human bladder, does not act by killing the micro-organisms and spores that cause the ammoniacal fermentation; it merely prevents their development. This is shown by the circumstance that, after the ammoniacal decomposition of the urine has ceased under the use of the drug for several days, it begins again after its discontinuance. The urotropin must therefore be taken steadily for some time, and then, when its use is stopped, the ammoniacal decomposition may not reappear. Thus I have observed a very severe case of cystitis, with ammoniacal decomposition of the urine, which caused the patient great pain and which was not relieved by irrigation of the bladder with disinfectant solutions and the use of internal remedies, in which the urotropin cured the fermentation and remedied the painful symptoms, and here, after three months' use of the drug, in daily doses of 0.5 grm. (7 1-2 grains) to 1 grm. (15 grains), the difficulties did not reappear after it was stopped. The freshly voided urine remained acid, and contained only small quantities of pus corpuscles.

It is a remarkable fact that the urine, voided after the ingestion of 1.0 to 1.5 grm. (15 to 22 1-2 grains) of urotropin, becomes ammoniacal at ordinary temperatures, but it remains clear, and preserves its acid reaction when kept at a temperature of 37 degrees C. (98.6 degrees F.) in the incubator; and even the addition of several drops of urine in a condition of ammoniacal fermentation several days later does not set up the same process in the specimen. Evidently there must arise from the urotropin, at the temperature of the body, some substance that hinders the development of the micro-organisms that effect the ammoniacal fermentation. It is very possible that under these circumstances formaldehyde is separated from it, which, as is well known, prevents bacterial development, even when present in the smallest quantities. But I have not as yet been able to prove this fact

with certainty, even by boiling urine that has been kept for some time at a temperature of 37 degrees C. (98.6 degrees F.) with resorcin-soda lye, which is claimed by Lebbin to be a very delicate reaction for formaldehyde.

I also desire to emphasize the fact that urotropin has been useful in my experience in cases of cystitis, with decomposition of the urine, in which even large doses of the salicylate of soda, so frequently employed in this form of bladder trouble, has been entirely useless. I have recorded two cases in the paper mentioned above which prove this. Case No. 2, in which there was a very severe cystitis, is especially noticeable. Daily doses of urotropin of 1.5 grm (22 1-2 grains) quickly restored the acid reaction to the ammoniacal urine, and the patient's various difficulties lessened. They reappeared, however, together with the alkaline reaction and the ammoniacal smell of the urine, when the sodium salicylate, in daily doses of 6 grm. (90 grains), was substituted for the urotropin. When the latter drug was taken again the patient improved.

Urotropin does, however, form a combination with salicylic acid, to which J. A. Flexner has called attention, and which has been recommended by him for therapeutic use. I have made a number of experiments with the salicylate of urotropin, which was prepared for me by the "Chemische Fabrik auf Actien" (vorm. E. Schering), of Berlin, using it in various maladies. I shall only mention here that daily doses of 2 grm. (30 grains) can be given, but that it is not desirable to administer more than 3 grm. (45 grains) daily for longer periods, on account of the occasional unpleasant by-effects that may be caused by the urotropin. And since the salicylate of urotropin contains about 50 per cent. of salicylic acid, the amount of this latter, introduced in the above mentioned doses, will be between 1 and 1.5 grm. (15 and 22 1-2 grains). The salicylate of urotropin is, therefore, not suitable for the treatment of such diseases as acute articular rheumatism, in which experience has shown that only large doses of salicylic acid combinations are effective. In cases where such large doses of salicylic acid, as well as urotropin are indicated, I should advise them to be given separately in appropriate quantities. In the treatment of cystitis, with ammoniacal fermentation of the urine, I see no reason to use the salicylic acid combination of urotropin. As I have said, urotropin alone acts very favorably, even in cases where large doses of sodium salicylate are entirely inefficacious.

—Reprinted from Der Arztliche Praktiker, Year X, 1897, No. 12.

PARESTHETIC NEURALGIA.

Osler refers to the numerous cases of paresthetic neuralgia recently recorded by Roth and others, in which there is a gradual development of burning pain and uneasy feelings and sometimes anesthesia in the antero-lateral portion of one thigh. The pain may be sufficient to prevent walking. The condition has been thought to be due to compression of the external cutaneous nerve either by the psoas muscle or otherwise. Osler records three somewhat similar cases where there was monocrural paresthesia. The patients were men, aged 32, 37 and 60 years respectively, healthy, but of nervous temperament. The illness began with a feeling of numbness or curious sensations in one leg. One patient stated that his leg felt as if burnt, sometimes "as if stuffed with foreign matter," and sometimes "as if inflamed and swollen." These symptoms were quickly followed in each patient by inability to walk more than a short distance, owing to the distressing sensations produced in the affected leg. In each case the physical examination was negative. The duration of the affection varied in these cases from one month to eight years.

—Journ. of Nerv. and Ment. Dis., March, 1897.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

AN EXCELLENT ANTISEPTIC FOR MINOR SURGERY.

BY CHARLES H. SPRINGER, M. D.,
Cleveland, O.

The following case will serve to illustrate the value of europhen in the treatment of chronic ulcers of the leg: The patient presented five varicose ulcers on the right leg, which had been present for 18 months and were about the size of a silver dollar, two being larger and three smaller. They extended down to the muscular tissue and discharged a foul, watery, purulent secretion. The edges were red and inflamed, and the skin infiltrated and reddened over the entire surface of the limb from the ankle to the knee. Contrary to the rule the ulcers were situated at the upper third of the leg, on its outer aspect and not near the ankle.

Under the use of europhen they speedily acquired a healthy character, ceased to discharge pus, and in a short time healed over, except one, which has since healed entirely under the internal use of ichthyol and proteiodide of mercury. Europhen is the only "iodine-antiseptic" I have used that to me appears to have none of the objectionable features of the others. It is non-poisonous, nearly odorless, non-escharotic, unirritating, causes no pain, but actually alleviating it and producing no eruption on the skin. It is soluble in fixed oils and is a more powerful antiseptic in this solution than as a powder.

In two cases of incised wounds of the hand, severing the palma arch, and in a case of long deep scalp wound, which were dressed by dusting on europhen, healing occurred rapidly by first intention. Europhen also appears to have an anesthetic action, alleviating pain in the parts when applied.

FORCED SPINAL CORRECTION CONDEMNED.

Menard, in a quite recent communication (11th May, 1897) to the Academy, absolutely condemns the operation, and considers it dangerous and inefficient. He has experimented on the dead body and examined museum specimens, and come to the following conclusions:

1. That, notwithstanding the dislocation produced by the "straightening," it is quite true that the cord and membranes remain intact.

2. That the forced straightening necessarily opens up the two segments of the diseased bony column and consequently forms a large gap, which measures, according to Menard, two, four or six centimeters, or more.

3. To make a perfect recovery this gap should get filled up with solid bony callus; and should this callus not form the cicatrix is only fibrous and retractile.

4. That this latter is what happens is ascertained from post-mortem and museum examinations; that the periosteum of the vertebrae is profoundly altered or destroyed and does not produce new bony tissue at any period in the evolution of the disease.

From these various communications Monod sums us thus: That in recent cases, and where the deformity is not great, the operation holds out a certain prospect of success, but in cases of long standing, and where several vertebrae are involved, the gap produced after straightening is

too great to be followed by other than fibrous tissue, so that there is great risk of the deformity returning when the support is removed.

In the Lancet (7th August, 1897) Jones and Tubby are reported as having demonstrated in the Royal Southern Hospital, Liverpool, on a series of cases the manipulations for immediate reduction of deformity. The children's ages varied from 3 to 8 years, and some of the curvatures were extreme. The deformities were reduced with considerable facility. . . . An exact estimate of the value of the treatment is impossible at present.

THE TRENDELENBURG POSTURE.

Keen, of Philadelphia (Annals of Surgery, July, 1897), advises the Trendelenburg posture during all operations involving directly or indirectly the cavities of the mouth, nose and trachea, and reports two cases, one of removal of epithelioma and the other of sarcoma of the tonsil, in illustration.

The patient is placed at an angle of 35 to 45 degrees, arrangements being made by means of a shoulder brace to prevent slipping. The advantages of the position are summarized as follows:

1. There is little danger of an aspiration pneumonia following the operation.

2. A preliminary tracheotomy is avoided—no slight advantage, as a tracheotomy wound is always necessarily an infected wound, and adds, therefore, greatly to the danger of the principal wound.

3. There is little difficulty in giving the anesthetic. An ordinary Allis inhaler is used until the patient is deeply anesthetised, when the inhaler is laid aside and chloroform given by means of a good-sized pledget of cotton held in ring forceps.

4. The mouth being gagged open, if the operation is intra-oral, the interior of the cavity is very readily seen, especially if the gag, as in Dr. Mear's mouth-gag, holds a tongue-depressor.

5. There is no spluttering of blood into the face of the operator, and therefore no interruption to the operation.

OPERATIVE TREATMENT OF GENERAL SUPPURATIVE PERITONITIS.

J. M. T. Finney describes a new operative procedure which he has successfully employed in five cases of general suppurative peritonitis, including one following perforating typhoid ulcer. He makes a long incision, draws all the coils of intestine outside the abdominal cavity ("practically disemboweling the patient for the time being"), and then thoroughly and systematically wipes out the peritoneal sac with large pledgets of gauze wrung out of hot salt solution, paying special attention to the pelvic portion. Next, the small intestine is cleansed loop by loop and replaced in the abdomen, and the incision closed save at one point, where a gauze drain protrudes. In order that a fair chance of success may be given, the operation should be performed within a few hours of the intestinal perforation which leads to the peritonitis.

—Johns Hopkins Hosp., Bull., July, '97.

DR. JOHN B. JUSTICE, OF QUINCY, ILL.

We were very much gratified to note through the Western exchanges that our good friend, Dr. John B. Justice, has been appointed first assistant surgeon to St. Mary's Hospital, in Quincy, Ill. Dr. Justice studied under several of the most noted pathologists and surgeons of New York.

He is a prominent and active member of the National Association of Railway Surgeons, but, what is better than all, he is a conscientious, honorable and upright physician of lofty sentiments and strict integrity.

We are confident that his confreres in his new field and the good Sisters will find him well worthy of their esteem and confidence.

Current Literature in Obstetrics and Gynecology.

CONSTIPATION IN THE PUERPERIUM.

Hubert writes on alarming symptoms in childbed, which depend entirely on constipation and disappear when the bowels are opened. No doubt the bowels are naturally slow to act after delivery. Sometimes the retention of fecal matter simulates metroperitonitis. Not only is there loss of appetite with foul tongue and breath, but tympanitic distension of the abdomen sets in with rigors, and temperature occasionally as high as 104 degrees. When a purge succeeds all these symptoms vanish. If the constipation be neglected true peritonitis may undoubtedly set in. This complication is not the peritonitis of puerperal infection due to the streptococcus, but a peritonitis of stercoral infection where the offending germ is the bacillus coli, which passing through the intestine infects the serous coat. There is also a later form of constipation in the puerperium, accompanied with hemorrhages, hemorrhoids and great pelvic congestion.
—Revue Medicale, Louvain, June 30, '97.

OPERATION FOR TUBAL PREGNANCY—DEATH.

Blanc reports an abdominal section performed by Blum on a multipara, where a fetal sac of the left tube had ruptured, pelvic inflammation existing for some time. The right tube was full of blood, and it was thought right to remove it, as well as the gestation sac. Free intestinal adhesions were detected and liberated. The pregnancy had lasted about two months; the patient had not suffered from melena, vomiting or other sign of disease in the gastro-intestinal tract. On the fourth day tympanites set in, and on the ninth the patient died with symptoms of acute peritonitis. A large perforating ulcer was found at the back of the small intestine at the junction of the duodenum and jejunum. It was a typical duodenal ulcer, but unusually wide, the perforation itself measuring nearly one inch in its widest diameter.
—Archives Generales de Medecine, September, 1896.

CONGENITAL ABSENCE OF UTERUS AND VAGINA.

W. L. Burrage reports the case of a girl of 19, engaged to be married, who had never menstruated and had had no menstrual molimen. The external genital organs, save for the absence of the introitus vaginae and hymen, were normal in appearance. In the position of the introitus the mucous membrane was redundant and wrinkled, and in the middle was a small opening leading into a pocket 1-5 cm. deep, from which a milky white secretion could be expressed. Careful recto-abdominal examination under anesthesia revealed no uterus or appendages. At the patient's request an operation was performed, having for its object the separation of the rectum from the bladder and the formation of a canal between the two lined flaps taken from the nymphae and perineum. After some delay the artificial vagina healed and presented a cavity 4.5 cm. deep and 2.5 cm. in diameter. Two years later she and her husband expressed themselves satisfied with the result. They have since adopted a 4-months-old baby.
—American Journ. Med. Sci., March,'97.

Miscellany.

SPINAL SURGERY.

Trapp, of Helferich's Clinic, relates an interesting case successfully treated by laminectomy. The extension treatment of Pott's disease with paralysis yields a large proportion of permanent recoveries. There are some cases, however, which resist this treatment. The total number of such cases operated upon is, in the author's opinion, small, and still fewer cases have been cured.

Case.—A man aged 20 fell through three metres onto the buttocks. Shortly after this he noticed a prominence over the dorsal spine. As this increased, a weakness in the legs appeared. When admitted some ten months later there was a considerable loss of power in the legs, with increased knee-jerks and ankle clonus. The rectum and bladder were unaffected. Extension was applied and improvement followed, the spastic symptoms diminishing. Two months later a sudden deterioration in his condition occurred. The spastic paralysis became much more marked, and slight bladder symptoms supervened. There were evening rises of temperature. Laminectomy was performed, the spines and parts of the laminae of the seventh and eighth dorsal vertebrae were removed. The contents of the spinal canal then protruded at once into the opening. No pulsation could be felt. The dura mater was opened and one teaspoonful of a thick yellow pus was evacuated. The foot clonus disappeared at once on the right side, and the patellar clonus became less on both sides. In a month's time the legs could be lifted some distance from the bed, and four weeks later he began to attempt to walk. In four months after the operation, in January, 1897, he could walk alone and without support. The development of tuberculous disease is known to follow upon injury. The author then refers to the edema theory of paralysis in cases of vertebral disease. The sudden increase in the symptoms was probably due to the rupture of a tuberculous focus through the dura mater, which thus produced an increasing compression paraplegia. In this case it is shown that intradural tuberculous disease may be treated by operation with success. Helferich does not remove the whole of the arch, thus leaving greater support for the spinal column. Extension was useful in the after treatment. A plaster of paris case was eventually applied. The importance of the case lies in (1) the behavior of the paralysis and (2) the recovery after operation, notwithstanding the intrameningeal site of the abscess. A similar case has not, within the author's knowledge, been put on record.

—Munch. Med. Woch., July 6, 1897.

TREATMENT OF ANOSMIA.

Bibard has recently taken up the study of this subject. Among the causes of anosmia he refers to blows on the head, which are much more frequent than is generally supposed as a cause of loss of the sense of smell. They may or may not be accompanied by fracture, for, according to the author's observations, a severe blow on the back of the head, as from a fall, is quite capable of causing laceration of the Schneiderian membrane or tearing of the olfactory nerves in their passage through the lamina cribosa of the ethmoid. In cases of essential anosmia without nasal lesion the author has found the following treatment produce good results: Nasal irrigation every morning, with warm water by means of Weber's siphon; to snuff three times the following powder: Sulphate of quinine, 10 cg.; subnitrate of bismuth, 10 g.; thirdly, electricity. In cases of hysterical anosmia the last is the most effective, and is employed in the form of faradization to the root of the nose, and this must be employed so as to produce actual pain.

—These de Paris, 1897.

ROYAL COLLEGE OF PHYSICIANS
4 DEC 97

The Times and Register.

VOL. XXXIV. No. 10. PHILADELPHIA AND BOSTON, NOV. 20, 1897. WHOLE No. 950.

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Original

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

DIVISION OF TUMORS ON AN ANATOMICAL BASIS; GENERAL CHARACTER.

All genuine tumor tissue is a new growth. This is of fundamental importance to bear in mind.

But one naturally inquires—a new growth of what, and where? To which may be answered, of any tissue or organized structure, except the teeth, the hair and the nails, either vascular or non-vascular. A new growth implies either new elements or an augmentation of the normal. And hence a local inflammatory intumescence, strictly speaking, is a tumor, from a histologic standpoint, but is lacking the clinic essential of permanence, in the cellular infiltration.

Heitzman based his classification of tumors on the dominant histologic features presented in each group, and classed them in two divisions, the benign and malignant. With certain modifications this will be employed here, in order to consider pathology as well as histology.

In the first list were included:

(a) Myxoma.
(b) Fibroma.
(c) Chondroma.
(d) Osteoma.
(e) Lipoma.
(f) Angioma.
(g) Myeloma.
(h) Meuroma.
(i) Papilloma.
(k) Adenoma.
(l) Cystoma.

SECOND DIVISION.

Sarcoma and Cancer.

This classification, however simple for the study of the morphology of tumors, is, like most others, lacking and unsatisfactory when the clinic and practice side of the subject is considered.

This is obvious to anyone who has critically studied the grosser and finer elements of many new growths. The growth of tumors in various situations takes on various phases of morphologic changes, so that at one stage we may find one class of cellular elements dominant, and at an advanced stage another; and sometimes, in different sections of the same mass, one may find the most dissimilar features. Thus some years ago in a large submaxillary tumor, removed by me from a young woman, from three sections removed from different areas three experienced microscopists made different diagnoses.

It is therefore evident that in bestowing on various new growth special designations, it is intended only to express the anatomic structure which is most pronounced.

MYXOMA, MUCOID, GELATINOUS TUMORS.

Myxoma, so-called because of the special character of its capsule and oiscid quality of its contents.

Its nearest approach to a normal structure is the umbilical cord and the placental tissue.

It is made up of the most primitive type of connective tissue; it is but slightly vascular, except at its root; is quite devoid of nerves or lymphatics and consequently is lowly organized.

Myoma usually appears under two forms—as a primary growth, and as one of the many phases of interstitial degeneration of tumor formation. It is commonly found in fibrous outgrowths, contiguous to mucous surfaces, as "myxofibroma" and in those large edematous uterine tumors, as a "myomyxoma."

We find the pure myxoma most commonly as an outgrowth from mucous surfaces, as the nasal, the aural or uterine.

Here it is recognized as polypus or hygroma. Its name would imply that several appear simultaneously or that it has multiple attachments. But like all surface tumors it may appear singly as often as in the multiple form; it may have a short pedicle or a sessile base.

When of considerable dimensions and exposed to friction, moisture and the air its investments become thickened, highly vascular and of a red hue. One remarkable feature about these excresences, when they are lodged in the nasal-fossae, is that they undergo marked augmentation in volume in damp or wet weather.

In themselves polypi are innocent, being only a source of trouble through the mechanic obstruction and irritation which they produce. Some of them seem to possess a life limit and are sometimes thrown off by sloughing, while, again, they manifest a most extraordinary tenacity, persistently recurring, unless every vestige of them is destroyed. This is a striking and distinctive characteristic of those sprouting up anywhere over Schneider's membrane, although those found in the uterus, extirpated, rarely give further trouble.

The histologic characters of a myoma are the large reticulated spaces, the groundwork of amorphous substance and large polynucleated corpuscles, and, although there are various types, those are the essential and definite features of all under the microscope.

It has been heretofore stated that nearly all new growths, within easy touch and inspection, presented many simple characters, which very frequently enable us to stamp its character. Myxoma, myxofibroma or myxomyoma are no exceptions.

But mucoid elements are not essential to every class of pathologic condition of the tissue elements, which belong to what pathologists classify as "myxomatous," because their classification is not, in this instance, always based so much on the presence of glue in the groundwork as the arrangement of the interstitial framework, and hence it follows that any of the connective tissues, the seat of aqueous infiltration, as in edema, local or general, is in a transient or permanent state of myxomatous mutation, as it is understood in histology. Myxomatous tissue, then, is essential and contingent, the one a true neoplasmic state and the other but a phase of pathologic change, in the normal or newly formed tissue elements.

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*NEURAL AND PSYCHIC MANIFESTATIONS SUBSEQUENT TO FRACTURES AND DISLOCATIONS.

BY THOMAS H. MANLEY, M. D.,

Professor of Surgery at the New York Clinical School of Medicine, New York.

When from the application of great physic violence to the body certain pathologic conditions result it is often desirable and necessary to forecast the ulterior effects on the functions of the cerebro-spinal axis, in these cases followed by various degrees of repair. A brief consideration of this theme is here submitted.

INFLUENCES AND CONDITIONS BEARING ON THE EFFECTS—REPAIR AND SEQUELAE.

Perfect repair, or restoration of function, after a complete fracture of a fully developed osseous body or shaft, never occurs. The nearest approach to it we find in the infant, child, or youth, whose bones are not perfectly developed.

Children outgrow the effects by recuperative processes, conjoined with continued development.

In the adult the matured bone possesses great resistance, requiring proportionate force to disorganize or displace it; the shock and laceration of contiguous structures being considerable. As the stage of senility approaches pronounced vascular changes commence, the compact tissue of the bone shaft, in its central lamellae, becomes avascular, hard and brittle. The bone marrow has shared in this change and what was once red is now yellow.

REGIONAL DIVISION AND ORGANIC COMPLICATIONS.

The region of the body, or the bones involved, influence the immediate and remote effects of fractures, viz., those of the skull, spine, ribs, sternum, pelvic bones or the extremeties, very much depending on whether the fracture is in near contact with important organs. Fractures of the upper extremity are less trying than those of the lower, because of the comfortable fixation apparatus they may be placed in. The laceration of the nerve trunks plays an important role in the degree of discomfort succeeding fracture of bone shafts.

*Abstract of paper read before the New York State Association of Railway Surgeons, November 6, 1897.

LOCAL AND CONSTITUTIONAL CONDITIONS SUPERVENING AFTER FRACTURE, IN WHICH VARYING DEGREES OF PAIN ARE A NOTABLE FEATURE.

Some there are who never fully survive the shock of fracture when violent concussive force has been sustained by the whole body, or when the emotions are impressed by the circumstances attending the accident. The pleurisy and emphysema following severe costal fractures, the synovitis when a joint is involved, the complication of the soft parts, the rupture of the ligaments, tendons and muscles, all produce pain, and wear on the system. Femoral fracture in old people is a very serious affair.

A simple fracture does not exist, and our English-speaking authors have not as yet produced a rational and definite classification of fractures. Pain is an integral factor of every fracture, and is a manifestation of nature that something has gone wrong; especially is this so after a fracture has been fixed, and when pain asserts itself it should not be stifled by narcotics, but the dressings removed and the parts inspected.

Pain and weakness in a limb may remain long after the fragments have been reduced, or a fracture has been treated, from:

First, the original extent of disorganization.

Second, non-union or mal-union.

Third, improper treatment.

The above are the exceptions. It is well to remember them, for easily and effectually adjusted fragments are seldom a source of distraint, suffering or weakness.

In civil litigation the degree and character of one's suffering are always taken into consideration, and on professional opinion the Court must be guided in many cases.

THE CONDITION OF THE PATIENT AS A FACTOR IN NEURO-PSYCHIC PHENOMENA AFTER TRAUMA.

A knowledge of the fact that hysteria, rheumatism, neuralgia and other systemic conditions often follow osseous injuries, will remind us that the patient, as well as the injured bone or limb must be treated.

The idiosyncrasies of individuals, when we apply mechanical devices for the reduction and fixation of fractures, influence the result of our treatment, some doing well with slack dressings, others with firm, tight bandages and splints, while some prefer to have the limb in a flexed attitude, and others in a straight position, etc.

THE UTILITY OR PROPRIETY OF OPERATIVE INTERVENTION IN FRACTURES OR DISLOCATIONS.

The one who makes a simple femoral fracture compound, wires a patella or undertakes an arithrotomy for an irreducible humero-napular dislocation, assumes a grave responsibility.

Society Reports.

OBSTETRICAL SOCIETY OF CINCINNATI.

THE PRESIDENT, C. L. BONIFIELD, M. D., IN THE CHAIR.
E. S. McKEE, M. D., Secretary.

CARCINOMA OF THE UTERUS.

Dr. Thad. A. Reamy—This specimen has been examined by one of the best microscopists in the city. It is a case of carcinoma involving the neck of the uterus. I exhibit the specimen only for the purpose of calling attention to one point in the case.

The patient is a woman of about 38 years of age, the mother of three children. The last child was 19 months old at the time of the operation. The patient had been bleeding for some time. I will not go into the symptoms in particular. The patient lives in the city, the wife of a fireman, and is a patient of Professor Nickles. I have in a very large number of cases used the clamps. I almost invariably use them in vaginal hysterectomy, and this is the first case in which I have had any hemorrhage, except in my earlier cases, where I removed some specimens when I did not get into sound tissue. In this case I applied but four clamps. One of them was a new instrument, that I had not noticed particularly. You all know they are made so they bite at the distal end of the blades very firmly, and then along the line they are apart to receive the substance that goes in between them. This clamp was a good deal apart, and it required considerable force to make it tight all the way down. I caught up a division from the ovarian artery, but it was not clamped sufficiently tight. It bled until it gave me considerable solicitude, and I had to pack with gauze. I did not remove the forceps, but packed it with gauze and put on a compress. It was simply an oversight on my part in not examining the clamp and applying it tight enough. In consequence of putting this packing in, I had to leave the clamps on 70 hours.

There is one other thing I would like to state while I am on my feet. In taking out the forceps and the gauze I had used to arrest further bleeding, I left a piece of the gauze —overlooked it—and it stayed in about eight or nine days. I mention that as a further contribution to the almost strange fact that you can with comparative safety have almost anything in the lower part of the pelvic cavity if the drain-way below is all open. It is difficult to have any trouble in the general peritoneal cavity if you have open drainage. You all know my method of doing this operation is not to stitch the peritoneum to the abdominal wall. I simply take the uterus out and let it take care of itself.

DISCUSSION.

Dr. Rufus B. Hall—The report of this case has been very interesting to me for two or three reasons. First, the fact is emphasized by the speaker that it is very difficult to have anything go wrong when you have free drainage from below, which is equivalent to having free drainage any place if you drain the cavity. I am glad to hear Dr. Reamy say this because I know it is true.

This is one of the strongest arguments that can be advanced in abdominal work in favor of the drainage of the peritoneal cavity, while so many are going so far the other way. The tendency now in abdominal work is not to drain only in suspicious cases, and many go further and advocate not to drain only in very suspicious cases. I am quite certain the pendulum has swung too far in that direction.

Another thing I wish to mention is the use of the clamp in vaginal hysterectomy. One of their strong arguments always has been perfect control over hemorrhage. Now, it is the exception to the rule that we want to call attention to. It is not the doctor's fault that he had a hemorrhage; it was the defect of the clamp. We say that it ought not to occur, but such things do occur, and I have known of cases in which the clamp was used and the patient died of hemorrhage—for instance, in cases like that referred to by the speaker, in which the disease is far advanced into the broad ligament. I believe that in using the clamp it would not be possible to close the peritoneal cavity by uniting the peritonium only above the ends of the clamps, thus closing off the peritoneal cavity by firm union before time for sloughing took place in the stump. For this reason I believe that in time the use of the clamp will be largely discontinued. In the majority of the cases of vaginal hysterectomy that are suitable for it, cases not far advanced—ones like this, for instance—a number of men would prefer the use of the ligature entirely, for with the ligature we can control hemorrhage just as well as with the use of the clamp. It takes but a little longer to make the operation this way, and then you protect your patient largely from sepsis following the operation, you close the peritoneal cavity as thoroughly as after an abdominal section, and just about as easily for one who is accustomed to work in the abdomen. If the operator would try getting along without the clasp once, I am satisfied he would see the patient recover so much easier without the clamp that for that reason if no other he would give her that chance. We know that with the use of the clamp the patient suffers from the third to the fifteenth or eighteenth day from a low form of sepsis, as a rule, occasionally from a well-marked attack of sepsis. About the time the sloughs come off from the bite of the clamp, some women suffer a great deal; they have a temperature of 101 degrees to 103 degrees, and considerable bad-smelling pus. There is less sloughing with the ligature than with the clamp. With the use of the clamp you depend on the omentum and bowel bridging over the pelvic floor. There is a large space left to be covered over in this way, although, of course, this contracts afterward. I have made only one operation of vaginal hysterectomy for malignant disease with the clamp in the past 50 cases. The patient took the anesthetic badly, and I put on the clamp because I could not secure the bleeding point quickly any other way. I always commence the vaginal hysterectomy with the clamps at hand, but I use them only when I am driven to it.

Dr. Reamy—I dislike to dissent from the conclusions of one so skillful and of so large experience in contrasting these two methods, and I will not take time now to discuss the relative merits of the clamp and ligature to any extent, but simply reply to the gentleman's criticism. As the records in my private hospital will show, I have done a great many more vaginal hysterectomies this year than usual, but I have not had any sepsis to amount to much in these cases. This patient has had only a temperature of 99 degrees, and much of the time only 98 degrees. If you leave it open and clamp it tight there is almost no sloughing. I think the operation can be done in half the time.

Dr. Hall—I will grant that, Doctor.

Dr. Reamy—In my experience I have more certainty in controlling the hemorrhage than I would with the ligature, because, as the doctor has said, there are some little bleeding points you can clamp to which it is difficult to apply a ligature, unless you ligate the entire broad liga-

ment. By the use of proper retractors you can bring the field into your view and put the clamp on under your eye. You will find in the specimen that I have the broad ligaments, the ovaries and tubes all perfect, although I used only four clamps. With the clamps you have more certain control over the hemorrhage than you do with the ligature; you can do the operation in half the time it would take were you to use the ligature, and you have a free open drainage. That is the advantage you have, I think. Of course, you would not clamp all cases.

As to the cicatricial contraction to which the doctor has referred, I do not know a single case in which an accident has occurred from vaginal hysterectomy with clamps in my practice in the past three years. You can carry your hands up therein two months and you will feel the vagina closed. You do at first feel the intestines, but I take my clamp off in 48 hours, and then you cannot feel the intestines. As the doctor has said, you have a wide cavity at the start, but that does not persist.

Dr. Hall—A doctor from Kansas City has reported a case and shown the specimens.

Dr. Reamy—You are right; cases do occur.

Dr. James Franklin Heady reported a case of

RUPTURED TUBAL PREGNANCY OF RIGHT TUBE, FOLLOWED IN NINETY-SEVEN DAYS BY RUPTURED TUBAL PREGNANCY OF THE LEFT TUBE IN THE SAME PATIENT.

M. S., colored, aged 39, married the second time, one child 6 years old, result of second marriage. Menstruation regular, but often painful; otherwise always healthy. Last menstruation October 15, 1896.

Since November 15 has had some uneasiness in right ovarian region, accompanied with signs of pregnancy. December 1 she was seized with a sickening pain in right inguinal region, extending down anterior part of thigh; nausea and vomiting; pulse 90 and small; extremeties cold. Put to bed and morphia, 1-4 gr. given. The next day only a little soreness. She was up and during the next two weeks attended to her household duties, which included washing and ironing. During this time she rode 20 miles on a railroad.

December 15, while straining at stool, she was seized with same pain, only more severe, accompanied with nausea and vomiting. Pulse 100, temperature 98 degrees; hands and feet cold, surface covered with a cold, clammy perspiration. Dorsal decubitus with the thighs flexed upon the abdomen. Vaginal examination revealed a soft mass the size of an orange to the right of the uterus, pushing the latter to the left and forward. Considerable pain was produced by pressure. Whisky and morphia to quiet the pain were given and absolute quiet in recumbent position was enjoined.

No material change until December 20, when a vaginal discharge commenced, offensive at first, but after that resembling menstrual fluid. Pulse 100, temperature 99 degrees; no material change in the pelvic conditions.

December 23, 3 P. M., a third attack of pain, similar to the last, accompanied with same class of symptoms. Vaginal examination showed uterus pushed farther to the left and front; increased tenderness. The next day Dr. R. B. Hall was called and the patient sent to the Presbyterian Hospital for operation.

December 25 Dr. R. B. Hall operated; present, Drs. G. M. Meek, Westchester, O.; Coulter, J. A. Hall, of this city, and myself. The specimen here presented was removed, together with about one pint of dark blood-clots.

On January 16 and February 16, 1897, menstruated. March 16 missed, when symptoms of pregnancy commenced; also some uneasiness in left ovarian region.

April 1, 3 P. M., after carrying a basket of clothes upstairs, she was seized with a severe pain in the left hypochrondriac region, which went down until, using the patient's words, it stopped in the womb. The pain there was as if something wanted to come out. In my absence Dr. H. H. Smith was called and found her in collapse. He gave morphia,

1-4 gr., hypodermically; strichnia, 1-50 gr., by the mouth, and heat externally. At 6 P. M. I first saw her and found the following conditions: Dorsal decubitus with thighs flexed upon the abdomen, extremities cold, surface covered with a profuse cold perspiration, nausea, vomiting, great thirst, pulseless, temperature 96.5 degrees—in short, all the symptoms of internal hemorrhage.

Digitaline 1-100 gr., strychnine nitrate 1-50 gr., were given every four hours. Artificial heat was applied and small quantityes of whisky given frequently by the mouth. On vaginal examination the uterus was found pushed down firmly against the anterior wall of the pelvis; the vault of the vagina was pressed down. A soft mass the size of your double fist could be recognized back of and to the left of the uterus. The examination was quite painful.

April 2, 5 A. M., some reaction; pulse about 100, temperature 98.5 degrees. Dr. R. B. Hall saw her at 8 A. M. and confirmed the physical condition found. She was removed to the Presbyterian Hospital and operated at 2 P. M. of the same day by Dr. Hall. The specimen here presented was removed with about a quart of blood-clots and considerable fluid blood. Present, Drs. E. H. French, of Piqua, O.; the house physician, Dr. Rousch, and myself.

REPORT OF OPERATION.

Dr. Rufus B. Hall—This specimen is the right Fallopian tube and ovary, with placenta and some old blood-clot, removed from Dr. Heady's patient on last Christmas day. The specimen having been in alcohol since that time, it does not show the details as plainly as the recent specimen. The fetus was not found, yet the rent in the tube was not large enough to expel all the placenta, and it remained in the tube incorporated with the blood-clot. When it was fresh the umbilical cord could be plainly seen. The fetus could not have been more than an inch in length, and probably was extruded into the peritoneal cavity at the time of rupture at the time of the first attack of pain, which occurred 24 days before the operation. It may have been macerated or so nearly absorbed that it could not be easily recognized in the blood-clot. The patient made an uninterrupted recovery, and went home at the end of four weeks. At the time of this operation the left tube and ovary were brought into the wound and examined. Except a slight adhesion of the ovary and portion of the tube, there was no marked disease. The adhesions were liberated and the ovary and tube allowed to remain.

In all cases of tubal pregnancy coming under my observation, if there is marked disease of the opposite tube, I have unhesitatingly removed it also. The experience in this case emphasizes in a marked manner the necessity of exercising unusual care in dealing with the opposite side.

The clinical history and the physical condition have been so accurately described by Dr. Heady that I shall not refer to them. There could be no doubting the diagnosis as presented at the time of my visit. When we told the patient, an ignorant colored woman, of her condition, I was very profoundly impressed with her remark to me. She said: "Why, you wicked doctor! Why did you leave me in a condition to go through this awful operation a second time?" I felt I was not wholly blameless, yet I have no hesitation in saying that at the first operation I did what I considered was for the patient's best interests.

At the second operation the incision was made in the scar left by the first incision. There were no adhesions encountered, except at the upper end of the scar the omentum was adherent for about one-half inch broad by three-quarters of an inch long. There was fully a quart, if not more, of blood-clot, and about a pint of fluid blood in the peritoneal cavity. The rupture in the tube was near the uterine end, extending to within less than a half inch of the uterus. The placenta remained in the tube incorporated with the old blood-clot as in the former instance. The principal bleeding was from the uterine end of the ovarian artery, which was severed. From the first of this attack, April 1, the patient

complained of pain in the region of the spleen, and said this could not be ruptured tubal pregnancy, as the pain was not located where it was in the first instance. She tried to argue with us and convince us that an operation was not necessary. There was more than a pint of firmly-clotted blood removed from about the region of the spleen and loin, in addition to that in the pelvis. The fetus, about three-quarters of an inch in length, was found in the blood-clot in the pelvis. It shows very nicely in the glycerine in which it was preserved. The cavity we it was preserved.

The cavity was thoroughly irrigated and rained and the patient has had an easy convalescence. I have no hesitation in saying she will recover without any difficulty, this being the seventh day since the operation. She has a normal pulse and temperature.

To my knowledge, this is the first instance of a tubal pregnancy followed at such a short interval by a second tubal pregnancy. So far as I know, it is the first case in this city, and I sincerely hope it may be the last. I believe we owe to these patients immunity from the possibility of a recurrence.

FIBROID TUMOR.

I present this large fibroid tumor because it has an unusually interesting history.

The patient from whom it was removed, Mrs. H. A. C., aged 38, mother of five children, was referred to me by Dr. Snorf, of Ansonia, O. She was admitted to my private hospital on January 25, where total extirpation was made on the 29th, and the specimen here presented removed.

This patient has been conscious of the existence of a tumor for the past five or six years, and has borne two children since her knowledge of its presence. After the birth of the first of these, a breech presentation, about three years ago, she had post-partum hemorrhage and came very near losing her life. For several days after her confinement her physician was compelled to empty the uterus of clots daily. The tumor was then about the size of a large cocoanut.

She made a tedious convalescence, but enjoyed comparatively good health until she became pregnant the last time. During gestation she suffered a great deal from pain and lost considerable flesh and strength, and when her confinement came she was in very poor physical condition for it. The labor was tedious, was a breech presentation, and was followed by post-partum hemorrhage, which was even more alarming than at the previous confinement. As in the preceding confinement, the attending physician was compelled to empty the uterus of blood-clots every day for more than two weeks. It continued until she was almost exsanguinated. During this time she developed sepsis, followed by peritonitis. For a period of four or five weeks it was very doubtful whether or not she would recover. I was called in consultation with her physician, and advised, should she recover from her sepsis, removal of the tumor as soon as her general health would permit. This was done about four months after her delivery. The patient has made a prompt and uninterrupted recovery.

The case is interesting as illustrating the danger of pregnancy in connection with fibroid tumors. The fact that the tumor grew from the upper segment of the body of the uterus made it possible for her to be delivered with the presence of the tumor, but she incurred great risk of dying from hemorrhage following the delivery. Another risk to which this patient was subjected is sepsis. The necessity for the frequent introduction of the hand into the uterus to empty it of clots is an additional risk. In those cases where it is not necessary to introduce the hands there is risk of sepsis from the fact that the uterus cannot contract so thoroughly to empty itself, and decomposition of the blood-clot follows. This patient, her husband and her friends were exceedingly anxious to have the operation before she should be again subjected to the great risk in childbirth.

THREE CASES OF APPENDICITIS.

Dr. Edwin Ricketts—This is an appendix removed from our friend, Dr. M., three weeks ago to-day. He

gives a history of returning appendicitis for ten years. He had what he called a blind hernia. He was out of his work for a year. Previous to the operation he was in bed for two days. The distal end of the appendix was found attached to Poupart's ligament. There were present two or three drops of pus. We so often hear the cry: "Wait for pus! Wait for pus!" Yet for pain we were justified in the operation in this case. There has been no trouble whatever in the recovery of the doctor.

I want you to notice the distal end of this appendix, which was removed from a woman, aged 50 years, who had recurrent attacks of appendicitis for eight years. She came into the hospital in a stooping posture, which position she had maintained for a year. The diagnosis of appendicitis was made, and the abdomen was opened a week ago to-morrow. A strange state of things was found. This appendix was five inches in length, and the distal end was attached to the ovary and Fallopian tube on the right side. The temperature has not been above 98.5 degrees, and I never saw a patient do nicer.

A girl 14 years of age was taken ill on Thanksgiving day, up in the State, although she was a patient of Dr. McGrew and resided in Pleasant Ridge. The doctor was called to see her and found her with fever—99.5 degrees, he told me—and her pulse was 110. A few days after coming under observation she was taken with dyspnea. I reached her on Sunday morning early, and at that time the distress of this patient was something frightful to behold; her face was livid and her respiration gasping, so I was satisfied we had pus in the pleural cavity, and pushed in a hypodermic needle and withdrew quite readily a syringeful of fluid. We immediately gave her chloroform and cut into the cavity and took out about a pint of fluid. She had blisters over the region of the appendix. Within three days we were able to take the gauze out of the pleural cavity, and, strange to say, we let it heal and we have had no trouble with the pleural cavity. In two weeks, lacking two days, we opened up the abdomen and turned out almost two quarts of pus, it seems almost incredulous to relate, and yet it is true, and the most foul-smelling pus, which is so characteristic of appendical abscesses. The gauze was made use of in drainage, and now the patient's temperature is 99 degrees and the pulse down to 90 and up to 100. She is eating, and we have every indication of the patient making a nice recovery.

These cases, I think, about cover the ground of appendicitis.

OVARIAN TUMOR.

This specimen was removed from a lady 50 years old. She first noticed this tumor last September. The diagnosis of ovarian tumor was made, and 48 hours ago at 11 o'clock this morning the operation was done. On incising the sac we found the fluid would not run. It was my first experience with such fluid. On the opposite side we had an ovarian tumor. A double ovariotomy was done, and this patient now for about 55 hours has been doing well. She has not taken a dose of morphia. And in a case of appendicitis in a lady we got along without morphia. The bladder in this girl was pulled up about to the umbilicus, and in incising the abdomen I laid the bladder open before I was aware that it was anywhere near, and before proceeding with the operation I repaired the damage with silk-worm gut, putting in six interrupted sutures, and I have not had any trouble with it. I was careful, after stitching the bladder, to close the one above so no infection could get in. There has not been any untoward symptom, and it is now three weeks since the operation was done.

Dr. Bonifield—Were there any papillary growths in the larger tumor?

Dr. Ricketts—No, sir; I would say the pedicle to the larger tumor is the largest one I have ever put a ligature on.

DISCUSSION.

Dr. Johnstone—One of those cases which referred to the pus in the pleural cavity is rather a rare point, but

one to which we do not pay enough attention, and that is the connection between the hepatic, diaphragmatic region and the appendix. The first time my attention was ever called to this was something like 12 or 14 years ago, after I had several times opened abscesses of the appendix. There was a little Jew dropped in a town down in Kentucky where I was practicing. I treated him along for a week or ten days, when, to my great surprise, he developed what seemed to be acute hepatitis. The mass projected an inch or two below the ribs and was very sore. There was no literature on the subject at the time with which I was familiar. In about a month the same patient was off with a case of croupous pneumonia, which filled all of the lower lobe of the right lung. I am happy to say the man got well. There was a progressive inflammation without suppuration, which traveled up the right side, gave an acute hepatitis and later a croupous pneumonia.

Since that time I have had a case (last year), which was a sad thing all around. A leading lawyer of his region I was called to see, and I found what seemed like a case of chronic appendicitis. I saw him about 1 o'clock in the morning, and I had to come back on the 3 o'clock train. It was perfectly plain that nothing could be done there; he would have to be brought to the city. In studying the case I got it into my head that it was not an appendicitis, but carcinoma. Without saying anything to a general surgeon of this city, with whom I consulted, he came to the same conclusion. The man would have very great colicky pains now and then. The lump was not larger than a walnut, just in the region of the appendix, although a little further out, nearer the flare of the ilium than you would expect an appendicitis. An exploratory incision was made and the little lump of carcinomatous tissue was found near the ileocecal valve. We would have exsected it but for the fact that the glands were infected. The patient did beautifully for three days, and then on came a catarrhal pneumonia. He had a markedly tubercular family history. He had been alarmed himself by the fear that he had tuberculosis. The whole question with me has been whether that was an old smoldering tuberculous condition of the lung or whether it was the ether that started it, or whether it was the connection of the lymphatics around the ligature and through the pleural cavity. It is known that some of the lymphatics pass in this way through the central tendon of the diaphragm to the pleural cavity. I am only too glad that Dr. Ricketts reported this case, because it is just in line with one over which I have had a good deal of thought. A case of sub-hepatic abscess is reported in one of the journals here in the city, which was produced in the same way.

Dr. Giles Mitchell—While Dr. Hall was reporting his case of fibroid tumor and giving the most cogent reasons for the removal of these growths, I thought of a case which I operated on for a fibroid about three times as large as the one the doctor exhibited, three weeks ago yesterday at the Presbyterian Hospital, where the history given was of five or six years' standing, where there had never been a history of hemorrhage, where the menstruation had been regular, had never gone beyond five days, and the only discomfort the patient had was during the last year a sense of weight and heaviness about the pelvis and frequent attacks of nausea and vomiting. This is the only case I have encountered in which hemorrhage was not a pronounced symptom. Of course, after a tumor becomes subperitoneal you do not have any disturbance of the menstrual function, but usually the hemorrhage is pronounced and sometimes continues if the cases are not operated on soon enough.

Dr. Hall—I want to make a few remarks on the bladder injury of the case of Dr. Ricketts. I have injured the bladder under similar circumstances on more than one occasion, and I have never thought it of sufficient importance to say much about it. Injury of the bladder in abdominal operations I do not consider much of a calamity to the patient. I have never seen a case do badly

after being injured in that way. The reason I brought this question up was that I was a little surprised at the doctor's method of treating the case. I have always treated those cases as I would an ordinary cholecystotomy, attaching the bladder to the abdominal wall and passing the sutures through the abdominal wall and the bladder, so that the peritoneum of the bladder would be brought to the abdominal peritoneum, and then fix a little drainage tube through the abdominal wall into the bladder an inch or two for 48 hours, and during this time have the patient catheterized every three or four hours, or, if necessary, have a self-retaining catheter introduced. I remember one instance in which I laid the bladder open fully eight inches. I laid it open where it doubled onto itself, through two thicknesses of bladder. At the time I reported this case in detail, so I am not ashamed to report it again. I am not criticising the doctor for injuring the bladder, but I do not like to put a buried suture into the bladder for fear I may hear from it again.

Dr. Ray, of Portsmouth, O.—I do not know that I have anything to say, except in connection with the cases of appendicitis, especially that of Dr. Ricketts' with suppuration. I had some experience with that class of cases last summer in opening up an abscess caused by appendicitis, and afterward drained for some length of time. The doctor in charge allowed the man to get up, supposing he was well, for it had quit discharging, and two or three weeks afterward I noticed in the paper that the man had died. I saw the doctor afterward and asked him what was the matter with the man. He said the patient got worse and they put him back to bed and he took pneumonia and died. At any rate the patient died with a right-sided pneumonia. I believe, if I understand the doctor right, in his treatment of the bladder he treats it as if he had done that on purpose; he made a suprapubic lithotomy.

Dr. Bonifield—In regard to the pus traveling up, I reported a case of appendicitis, very acute in its incipiency, which I saw on Mt. Auburn with Dr. Forchheimer. In that case the boy convalesced quite satisfactorily for several weeks. At the end of that time I examined him very carefully and was unable to find anything in the region of the liver or anywhere else to account for the temperature. Suddenly the temperature began to get higher, and one day it shot up to 105 degrees; Forchheimer and I were telephoned for to come there, and we found the boy spitting pus. He then recovered. I saw a very large fever temperature only recently, in which the patient gave no history of hemorrhage. The hemorrhage comes from endometritis, and if we do not have hypertrophic endometritis we may have hemorrhage.

Dr. Giles Mitchell—I would just like to say that Dr. Illoway reported to this society about 13 years ago a case in which the pus from a pelvic abscess after a number of months perforated the diaphragm and the woman expectorated a large quantity of pus.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

THE AMERICAN METHOD OF PERFORMING HYSTERECTOMY.

It is interesting to note that, notwithstanding all our American brag and bluster in all the departments of science and art we are able to hold our own and even make some claim to substantial and enduring advances along the lines of progress.

This has been notably the case in gynecologic surgery, which may be said to have been created and practically attained its present degree of perfection by surgeons of our country.

At the International Congress at Berlin the celebrated Peare presented an essay on "Vaginal Hysterectomy," in which he reported the most extraordinary success in removing fibroids by the vaginal route. He was soon followed by Doyen and Segond, who further utilized this passage for removing cancerous uteri and pus accumulations.

This method was early adopted by American operators, notably by Cushing and the late Dr. Lusk.

The first pronounced opposition it encountered was from Drs. Noble and Baldy, of Philadelphia.

Before the French surgeon's new method was described hysterectomy had been so generally and successfully performed by the abdominal route in this country as to be known abroad as the "American operation." This operation was done by the extra and intra-peritoneal plan. Of late years, since effective asepsis has been possible and the Mendelenburg position utilized, the intraperitoneal method has been chosen as the most effective and satisfactory.

In Europe the vaginal route is loosing ground, and it is interesting to note that the "American" is being generally preferred.

Under any circumstances a hysterectomy must be regarded as a formidable procedure, not so much from the dangers inherent in the operation as in the after consequences. But when such a pathologic state exists as renders imperative the extirpation of the uterus, taking everything into consideration, the abdominal incision, with drainage through the vagina is to be preferred. In this manner we are not working in the dark, the detritus drain off by the vagina, we are warned of the presence of secondary hemorrhage and moreover the probabilities of hernia are diminished.

THE USE AND ABUSE OF APPOINTING POWER IN PUBLIC HOSPITALS.

We have been somewhat amused at the fit of indignation with which our able contemporary, the Medical News, has lately lashed itself on the occasion of some sundry changes lately instituted in the Department of Charities by its officials, and designates them "The Commissioners of Charities' Fatal Blunder."

From our own personal knowledge of the affairs in the Department of Charities in New York, and this late transaction in particular, it is our opinion that if any "blunder" has been committed it has been by the News, which prematurely and in untenable premises made several allegations not supported by facts.

That the Commissioners "have seemed to be entirely insensible to the rights of physicians constituting medical boards of the city hospitals" now and always no one will dispute. But it should be remembered that on an appeal to the Supreme Court something more than a year ago, Judge Andrews presiding, it was declared that the Commissioners alone were responsible for the management of all hospitals under their jurisdiction, and had the power at their pleasure to remove or appoint any physician they pleased.

Formerly, medical boards were permitted the courtesy of nominating candidates for hospital vacancies, acceptable to the Commissioners, but they always understood it was petite and useless to send in the name of any candidate for an important appointment who was not possessor of "succession influence" outside of professional support. Indeed, it was little more than a mere formality.

But the present "reform" regime in the beginning of its brief career was anxious to further extend the privileges of medical boards, until it soon learned that there was treachery in the medical camp, and that in consequence of depending too implicitly on medical boards engineered by medical colleges they had been hoodwinked into inflicting a gross outrage on the profession. The whole profession of New York, as represented by its twenty medical societies, fiercely resented the insult, and demanded that the outside profession be given one-half of all the hospital appointments.

This was promised by the present Board of Charities, and the good work was inaugurated when the Commissioners threw aside the college yoke and appointed a practitioner, whose only crime was that he was not a toady or a heeler of any medical board. That "time has so consecrated this method of procedure that no one heretofore has sought admission to a visiting staff, save in this way," is to say the least, not supported by facts. For instance, no more than a year ago such an appointment was made in Randall's Island service. The writer is cognizant of an instance in a single hospital in which three members of the hospital staff were assigned to duty, quite regardless of the visiting staff.

As to the "personal worth and ability" New York has a plethora of these in the medical ranks endowed with these.

With a Diogenes lantern it may be possible to find such a rara-avis, by a medical man of such extreme altruistic motives as serve no personal motives, or advance personal interests in hospital positions; but in all candor it should be conceded that all important hospital appointments utilized in the acquisition of proficiency and eminence, are the enemies to fame or wealth in the profession.

It might have been as weak for the "News" to have postponed the demand for reconsideration of action by the Commissioners until after the late election.

In our late experience the "reformers" (?) in their intemperate haste to clear the Augean stables, medical boards and all, went to the Legislature for a "power of re-

moval bill" when the decapitating ax came down with a cengeance; but now that Tammany is called back to again govern, it is expected that no less swift, but more gentle, methods will be resorted to.

A BEAUTIFUL COMPARTMENT CAR.

It Has Been Placed on the Chesapeake & Ohio Route to Hot Springs.

To meet the constantly increasing travel between New York and Washington and the Virginia Hot Springs over the Chesapeake & Ohio F. F. V. Limited, the management of that road have added to the train a magnificent specimen of the latest product of the Pullman shops.

This car, christened the Blenheim, leaves New York, Philadelphia, Baltimore and Washington on Tuesdays, Thursdays and Saturdays, and runs direct to Hot Springs, leaving the latter place on Wednesdays, Fridays and Sundays. It is a compartment sleeping car, containing ten commodious and luxuriously furnished state rooms, each upholstered in heavy brocaded plush of different colors. The rooms are supplied with individual toilet apartments, the wash basins lowering from a bureau-like construction against the wall of the car. All of the interior woodwork is of finely polished mahogany, with ornamentations in Colonial style. In short, the car is a veritable palace on wheels, offering the traveler the conveniences and the privacy of a room in a modern hotel.

The F. F. V. train, electric lighted throughout and handsomely appointed, has always been a model of its kind, but this latest addition makes it unqualified anywhere.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.

Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

THE TREATMENT OF PELVIC DISEASES.

The major part of gynecological electro-therapeutics involves skill in the selection, management, manipulation and modification of but four chief methods of employing currents.

1. External method, the percutaneous administration of a galvanic current through the pelvis.

2. Vaginal faradic method (bipolar faradization).

3. Galvanic currents employed with one electrode in the vagina and the other externally.

4. Galvanic currents employed with one electrode in the uterus and the other externally.

The teachings of the electro-physiology of galvanic and improved induction coil currents, together with clinical experience, have rendered the choice of these methods and the selection of poles and regulation of dose a simple and faily exact matter.

In addition to these four leading methods of practice the faradic current is sometimes applied with one electrode in either the vagina or uterus, and one externally on the abdomen or lower spine, and metallic electrolysis is also superimposed upon galvanic current action—but the physician who can adapt these four methods to functional derangements or pathological states may be said to command nearly all the aid that medical electricity can furnish to medical and surgical gynecology by local applications.

Beyond these local methods there are also general benefits to be derived from a well-handled static machine, and beyond these are the surgical uses of electro-cautery. The experimental stage of methods of treatment has passed, and experience has amply demonstrated that no practitioner can afford to dispense with the help of medical electricity in the routine treatment of the diseases of women.

Owing to the elaborate terminology of pelvic affections the list of lesions treatable by electricity in all its forms seems a long one to the physician who has been familiar with the action of any one current alone. Moreover the general custom of referring to indications and applications in an indefinite manner has left the practitioner in doubt as to the form of current, polarity, electrodes, dosage and other essential particulars, so that gynecological electro-therapeutics has appeared to many to be as delusive as the mirage of the desert—a vague, difficult, whimsically mixed uncertainty of doubtful methods, with nothing but a trail of guesswork to guide the operator to results.

Such was the state of affairs in 1885, but it does not apply to 1897. As a matter of fact gynecology not only constitutes the most useful local field of electro-therapeutics, but the appartus required and the exact work each type of current will perform within the pelvis is more definitely mapped out, understood and applied, than in any other branch of medical electricity.

When, however, at the beginning of his experience the choice of one of the four chief methods of employing direct and induced currents for the relief of pelvic symptoms or disease, cannot be made at sight by the physician he can often solve the problem of treatment as he sometimes solves the problem of diagnosis—by exclusion.

He will rarely make a mistake if he initiates treatment with either bipolar vaginal sedation, or the sedative-tonic action of percutaneous galvanism in cases in which pain and tenderness are marked symptoms. These two methods possess great value, with practically no possibilities of harm and are always available at the first visit of the patient.

During the period of a woman's functional activity she is liable to pelvic diseases which circumstances make it hard to cure, and relapses which it is hard to prevent. It is as injudicious to rely upon electricity alone in the treatment of these difficult affections as it would be preposterous to rely upon any other single agent, however valuable. Electricity has, however, demonstrated its title to rank first among conservative remedies—with no other agent of its class in sight.

During the ten years, between 1884 and 1894, the practical possibilities and reliable utility of galvanic and fine induction coil currents were very fully developed by clinicians of unrivaled experience, at the head of whom stands the honored Apostoli; so that for several years past the status of these currents has been fully established for general recognition and employment.

Methods of technique are no longer in a nascent state of change, but have become more definitely determined than the accuracy of diagnosticians. Electricity has demonstrated its physiological and therapeutic actions and now stands ready to be employed. Many of the problems of the transition period of gynecological electro-therapeutics have been substantially settled since the first years during which improved induction coil apparatus were made available and the correct dosage of galvanic currents ascertained.

Book Reviews.

TWENTIETH CENTURY PRACTICE. An international encyclopedia of modern medical science. By leading authorities of Europe and America. Edited by Thos. L. Stedman, M. D., New York City. In 20 volumes. Volume XII., "Mental Diseases, Childhood and Old Age." New York. William Wood & Company. 1897.

Another important and interesting volume has been produced by the publishers of the Twentieth Century Practice. It is important because it gives in a concise and clear manner so much of that material which only comes under the eye of the specialist, but which is equally interesting to the general practitioner, for whom these volumes are intended. All the contributors to this volume are foreigners, but among the foremost of their profession in their individual specialties.

This work leads off with an article on "Insanity," by Dr. G. Fielding Blanford, of London, lecturer on psycological medicine at St. George's Hospital. He enters into a clear description of cerebral anatomy, the predisposing and exciting causes or tendencies of mental derangement and the symptoms before taking up the special manifestations. Space forbids the recounting of all the pages of this exceedingly interesting paper on insanity, but, for one involving the whole material of the subject, it is a masterpiece of conciseness and clearness.

"Idiocy" is the next subject, in a well-written paper by Dr. Paul Sollier. He quite severely criticises the definition of the term as given by many writers, especially Sequin's. He accords very little in way of treatment of this class of patients.

"Criminal Anthropology," by Dr. Cesare Lombroso, of Turin, is next in order in this volume. This forms a very interesting discussion on crime in all its phases, and is well illustrated with cuts of criminal heads.

"Old Age," by Dr. J. Boy-Teissier, of Marseilles, is a chapter which contains much that is but little written upon. He determines quite justly that death is a necessity, is useful and is good; that the physician's aim is to prevent immature death; that he may advance mature death. He defines natural death and that from disease; then discusses ordinary diseases of the aged, general and special manifestations.

"Diseases of Children," by Dr. Jules Cornby, of Paris, forms the subject of the next chapter. It is quite impossible to get everything pertaining to childhood and its disorders in such a short space as is allotted in this work, but Dr. Cornby has given a brief of the most important elements and left the elaboration for outside reading in works more especially devoted to this topic. This chapter closes the volume, which is an interesting and valuable addition to the preceding ones and will be greatly appreciated by the subscribers to this excellent work.

For family or medicinal use there is none better than the Jesse Moore whisky, either Bourbon or Rye. In cases or bulk. Jesse Moore, Hunt Co., Louisville, Ky., or L. Heineman, agent, Jamestown, N. Y.

Clinical Medicine.

In charge of Dr. J. J. Morrissey.

THE TREATMENT OF TUBERCULOSIS.

J. J. MORRISSEY, A. M., M. D.,

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From time to time in these columns we have adverted to the great desirability of recognizing back of every disease the personality of the patient. We are too apt to consider the general outlines of disease, and after making a diagnosis satisfactory to ourselves and prescribing certain routine treatment feel that our duty has been amply fulfilled. This may be said with more reason of tuberculosis than of any other prevalent disease. We find on examination certain physical signs denoting its presence. We tender advice as to the injurious effect of night air, prescribe creosote, and if the patient's means will permit, advise a change of climate. Then we rest in the consciousness of duty well performed. This method of procedure appears to me to be a very grave mistake. In the first place there are numerous people whose lungs have been the object of investigation of the bacilli tuberculosis, where the pathological evolution of acute inflammatory action has arisen and extended to a remarkable degree; yet they have to all objective and subjective appearances been cured. And in passing we might remark that patients return from the West and South after a residence of one or two years who are apparently cured. No cough, slight, if any expectoration, increase of weight, and in excellent condition so far as any manifestations of the disease are concerned. They remain in this condition for a year or 18 months, and then the disinclination for mental and physical labor returns, a feeling of lassitude marks every movement, the cough appears, and if the expectoration is carefully examined the bacilli are found. These patients have not been cured—the disease has simply been held in abeyance, and from some experience in this line of study the writer would state that it requires at least from four to five years clear immunity from every sign and symptom to say that the patient is cured.

It is not wise to prescribe the indiscriminate administration of creosote to every case of tuberculosis. In some patients it does vastly more harm than good, for it is apt to impair the integrity of the stomach and interfere with the higher processes of nutrition. If as much attention was given to the organs below the diaphragm in the treatment of phthisis as to those above that muscle our results would be more favorable. The general nutrition of the patient should be one of the prime objects sought for in treating tuberculosis, and that cannot be attained by the use of creosote in any and every case.

There is no doubt that in a few selected cases this drug has an excellent action, but the sphere of its influence is exceedingly limited, and it is unwise and unjust and demonstrates the careless ignorance of the physician, to make it a panacea for every form of chronic lung disease. Much can be done for the individual

patient if he is taken into consideration as well as the disease.

The presence of other factors which either aggravate or modify the prognosis is always to be considered. Is there chronic liver disease accompanying the tuberculosis, or interstitial nephritis with its reactionary tendencies on the heart, or is malassimilation present in the intestinal tract, and do we always strive to correct these systemic deficiencies before prescribing the creosote, and, lastly, are we as careful of the clothing as we should be in this class of cases? Repeated chills to the skin, as is well known, produce a high degree of renal hyperemia by the internal congestion which follows contraction of the cutaneous vessels, and this is followed by the accumulation of waste products in the circulation adding their debilitating influences to the toxic poisons generated by the presence of the bacilli tuberculosis.

All these and other considerations should govern our management of those afflicted with phthisis, and if we conscientiously and intelligently perform our duty we will find that the treatment is not as simplified as we have been led to believe.

We should ever be on the lookout for the development of acute exacerbations in the treatment of chronic diseases. In chronic diseases of the liver, acute hepatitis supervening becomes a serious factor; in chronic renal affections the presence of acute congestion bodes a grave prognosis, so in the phthistical—if pneumonia should develop the prognosis is gloomy. We can see then the importance of maintaining the subdiaphragmatic organs in as perfect a condition as possible.

It is not the destruction of the bacilli that we should chiefly seek after, but, what is of more importance, to improve the reparative capacities of the individual and thereby grant renewed vitality to the cellular structure of the lungs. There are thousands of people in New York whose expectoration would disclose on microscopical examination the presence of bacilli, but they have not tuberculosis, for there is no pathological process going on in their pulmonary tracts in which the bacilli may find a welcome resting place. Their development assumes a pathological character only after the vitality of the pulmonary cells has been impaired.

It is very difficult to convince a reasoning physician that the bacillus tuberculosis, per se, does much harm to a patient. It is the toxemia resulting from the presence of the bacilli in the lungs where pathological retrogression is taking place through the chemical processes set up by their activity and the activity of various other microbes for which they prepare the soil. The fever, the night sweats, the anorexia, the emaciation are all probably due to the absorption of the various toxins and their reactive inflammatory action.

In the earlier stages of tuberculosis, or even in the more advanced forms, when there is slight tendency to cavity formation, when in a word proliferation exceeds necrosis, iodine in its various preparations may be tried oftentimes with good effect. But, on the other hand, creosote given judiciously will frequently prove very serviceable where there is rapid softening and sepsis dominates the situation. Dr. Charles M. Cauldwell, chief of staff at St. Joseph's Hospital, an institution devoted entirely to the care and management of the consumptive, writing to the author states that in acute cases creosote has never seemed to be effective, and furthermore often does harm by upsetting an already feeble digestion. In chronic cases without fever, or with but slight and irregular temperature, he always looks for more or less improvement from this drug, if it does not disturb the digestion. As to dose: "I usually commence with very small doses, two or three drops three times a day, and gradually increase until I find the patient's capacity for the drug. Then drop the dose a little below this point and continue for a long time. When creosote does good it seems to me to do so largely by improving digestion and appetite, and by diminishing the bronchitis. Of course only the best creosote can be expected to do good. As far as I know, Morson's creosote still remains

unrivaled, although some of the German houses turn out an excellent article. A poor creosote is worse than none at all." I have quoted quite extensively from my colleague's letter, as his experience is invaluable, and what he says can be taken as ex cathedra.

There is then a broad line of demarcation to be laid down between those cases in which creosote should be administered and when it should be held in reserve.

Fever interferes with the processes of digestion, impairs the solvent qualities of the gastric juice and permits of the accumulation of fermentative products in the intestinal tract in which other ptomaines are formed. This species of auto-intoxication progresses more or less in every individual, and if the toxins so generated develop in excess or there is a deficiency in elimination another factor is added which intensifies the pathological condition already established.

Now, in tuberculosis the type of fever is twofold. There is (1) the inflammatory and (2) the resorptive. The first is characterized by continuous temperature, the consequence of inflammatory action in the lungs. There is seldom a break in the fever, and the debilitating night sweats are infrequent. But when the products of inflammatory action are degenerating and there is a constant absorption from the suppurating portions of the diseased tissue then we find the fever to be resorptive and accompanied by marked intermissions in the thermometric curve.

When the febrile movement is of this intermittent type the night sweats are apt to be abundant, there is loss of sleep, diarrhea and the generally enfeebled condition of the system found whereever acute septic processes manifest themselves.

It is just in this class of cases that creosote has been given promiscuously with the hope that it would stay the necrosis taking place in the lungs, but in many unselected cases it has only served to aggravate the patient's condition and impair the powers of digestion.

Each case then should be treated as an individual entity and not as one of many afflicted with the same disease. In many the fever is of a low type, the digestive processes are performed without friction, the strength is maintained and the septic process advances slowly and irregularly. In other cases there is a rapid breaking down of the pulmonary tissue, accompanied by high temperature and the various sequelae of systemic poisoning. In the first class mentioned creosote frequently effects wonderful changes in the patient's condition. There is a general bracing up of the entire system, the expectoration changes its character, the appetite returns, the weight increases and the local manifestations show marked improvement, so much so that frequently the activity of the inflammatory action apparently ceases.

EXERCISE.

Too much stress cannot be laid on the benefits of judiciously directed exercise, and particularly when this is taken in the open air. It is in the early stages that in a special manner "deep breathing" exercises should be pursued. The blood is made richer, its oxygen carrying power is increased, those portions of the lungs susceptible of stasis are made to react to the stimulating effects of the oxygen, the muscular system is strengthened, healthy respiration is sustained, and the reactionary effect upon the entire system is productive of much benefit. Cool and cold water shower baths are in a selected number of cases to be strongly advocated, and in the same line of treatment permit the patient, when well protected by suitable underwear, strong shoes, etc., to remain in the cold air as long as possible. It may not be generally known that the colder the atmospheric air the patient breathes the better; the more oxygen it contains, bulk for bulk, the more it acts as an antiseptic; the more it expands when it has been inspired, and in expanding dilates the air cells, the more it tends to cool the overheated lung tissues, rendering them less favorable for the multiplication of bacilli (Playter).

It is difficult to convince phthisical patients of the great utility of

cold baths. In the beginning it is better to apply the water warmed to a temperature in accordance with the patient's wishes; then gradually cool until the temperature is that of running water. The effect of the cold bath is to increase the amount of air inspired and expired, and also the amount of carbonic acid excreted and the amount of oxygen absorbed. The cold baths, it may be readily seen, have a remarkable oxidizing power, and thus burn up the "waste ash" which accumulates in the system where elimination is deficient, as in tuberculosis. Thus, with these waste products ptomaines are produced and add their pathological action to the already poisoned system. The same underlying principle, modified perhaps by the different causative factors which govern the use of the bath in fevers, is applicable to tuberculosis.

The cold bath lessens the increased tissue destruction and the production of the toxins by its remarkable powers of oxidation. Increased oxidation transforms the toxins into harmless, easily eliminable, soluble products. It also raises arterial tension and increases heart's action by its reflex action upon the nervous system.

Judiciously applied physiological principles of this character will often do more than internal medication.

FOREIGN EXCHANGES

Translated by Dr. D. A. Davidow.

PILCY PELLOTIN.

Pellotin is a new hypnotic prepared from anhalonium nilliamsi, of which two grains of the hydrochloride of the olralord can be injected subcutaneously without causing any effect beyond that of refreshing sleep. The author tried the drug in 58 cases of insomnia, giving one-third grain as a minimum dose. The patients were inmates of the principal lunatic asylum in Vienna.

In 29 cases a perfect result was obtained, the patient falling asleep within an hour and a half and remaining so all night. A moderate effect resulted in 17 cases, remaining ineffectual in 12 cases. Of the latter author considers that four should be excluded as not fair tests. Of the successful cases 19 reached to the minimum dose; none required more than one grain. Curiously the author himself was refractory, since one-third grain gave him only one hour's sleep. The good effect was noticed in cases where other hypnotism failed; thus one-third grain of the drug produced sleep in a patient who resisted 60 grains, and another 75 grains of paraldehyde. The author failed to observe the slowing of the pulse recorded by Jolly, or the collapse seen in one case by Longstein. Author did not attempt to obtain any anodyne effect. In two cases only was there giddiness, and one of these patients was a parandiac with sensory hallucinations. The author concludes that this drug is of value in many cases where others fail, and is particularly valuable in that it can be given subcutaneously without trouble. The dose recommended is 1-3 to 2-3 gr., repeated two or three times if necessary.

—Wien klin. Woch., 1896, No. 48.

THE ANALYSIS OF THE URINE AS A TEST FOR IMMUNITY.

POEHL.

According to author immunity varies not only with the nature of the infection, but also with the condition of the infected, and consequently on investigation of the latter must be of great importance for both natural and acquired immunity. P. holds that the resisting power of the organism depends very largely upon the manner in which its internal or tissue respiration is carried on, and states that he has never examined a case of infectious disease in which this has been normal. The most important predisposing cause of infection is autointoxication and the most potent agency in the production of this is deficient internal respiration. The whole problem may be elucidated by the study of the urine.

The main causes of autointoxication are (1) diminished alcalinity of the blood due to acidity of the tissues from over exertion or other causes, (2) insufficient supply of oxyzen, (3) abnormal fermentation processes in the intestine, (4) poisoning from without by bacterial or other agencies, (5) retention of metabolic products. Many of these conditions can be detected by an examination of the urine. Thus intestinal autointoxication is indicated when the proportion of organic to inorganic sulphates exceeds 1 to 10, and also when the amount of indicon is markedly increased. Diminution in the alcalinity of the blood may be inferred when the proportion of phosphoric acid estimated as disodium hydrogen phosphate is less than 50 per cent. of the normal, or when the proportion of uric acid to phosphoric acid estimated in this way is more than 2 to 5. Furthermore the proportion of urea nitrogen to total nitrogen is a test for oxydation processes in the tissues; when the proportion is less than 9 to 10 these are defective, and the same is the case when the amount of sodium chloride present is less than half that of urea. Author considers that the pernicious action of deficient alcalinity of the blood arises from non-production of spermin from the leucocytes, which, according to him, plays the part of a ferment in determining tissue respiration.

—Wien Med. Moch., 1897, No. 4.

INTRAMUSCULAR INJECTIONS IN SYPHILIS.

LUKASIEWITZ.

Author gives results of 500 cases treated by intramuscular injection of a 5 per cent. solution of perchloride of mercury, 1 cm. being injected into the gluteal muscles once a week. As an average six injections were made on each patient. The cases included all stages of syphilis in males and females, varying in age from 16 to 65 years. Author states that severe secondary lesions, including rupia, iritis, periostitis, chloroidoretinitis and laryngitis, yield to this form of treatment, also early tertiary conditions, such as cutaneous gummata. He calls attention to a peculiar phenomenon which appears after the first infection, namely, on increased distinctness of the syphilitic rash, and compares this to the reaction which follows the injection of Koch's tuberculin.

—Wien klin. Wochenschrift, Apr. 22, '97.

SYPHILIS OF THE HEART.

TRASSMAN.

Author assumes that when syphilis of the heart is said to be of rare occurence, it really applies to gummata of the heart. The diagnosis of cardiac syphilis is rarely possible. Gummatous pericarditis is rare, but a pericarditis may be present over a gomma in the cardiac wall. The same applied to a syphilitic endocarditis. The gummatae of the heart are of various sizes, from microscopic to that of a chestnut. They may soften or be connected to a hard mass owing to the proliferation of the intestinal tissue. As a result of softening there may be an aneurysm of the cardiac wall. Author records a case, a woman aged 38, who died of cardiac insufficiency. There was a large gumma at the apex of the ventricle, an aneurysm filled with clot on the anterior ventricular wall, and an aneurysmal

bulging of one mitral cusp toward the auricle. The ventricular septum was likewise defective, probably due to absorption of the gumma. The gummala are usually placed in the left ventricular wall. Syphilis of the heart is a late manifestation and very rarely has it been known to occur within the first two years. In the earlier stages we may have cardiac symptoms. There are no pathognomic symptoms for later syphilis of the heart. Cardiac insufficiency, edema, achthmia, dyspnea, etc., have been noted. Only in the rarest cases have there been symptoms of a typical valvular lesion. Sudden death is possible to occur. In Maracek's 63 cases 21 died unexpectedly. The existence of cardiac syphilis can be diagnosed indirectly. The guide would be early infection, other manifestations, the ineffectiveness of any other than anti-syphilitic treatment. Fibrous miocarditis or arterial disease cannot be removed with anti-syphilitic treatment, but is of value before such lesions become advanced. The treatment should not be vigorous, rather mild and protracted, for, while the gummala will certainly absorb quickly, it may lead to aneurism of the heart. The conclusion of the author is that syphilis does not spare even the heart.

—Munch. med. Wochenschr., May 4 and 11, 1897.

A NEW METHOD FOR THE PRESERVATION OF ANATOMICAL PREPARATIONS.

N. MELNIKOW-ROSWEDENKOW. On the preservation of anatomical preparations by the "Formalin-Alcohol-Glycerine-Acetate Method."
—Ziegler's Beitrage Bd. xxi, 1, 1897.

The various methods which have hitherto been employed in the preservation of pathological specimens for museums have failed more or less completely to preserve the colors of the specimen in their recent state. That this is a drawback of real importance is shown by the number of specimens in any pathological collection which thereby become unrecognizable. The new method which author advocates consists in fixing the specimen by means of formic aldehyde, subsequently treating it with alcohol and lastly presenting it in a solution of glycerine and potassium acetate. Originally the author employed pure undiluted formic aldehyde as a pickling reagent, "dry method," but in the subsequent paper recommends, with few exceptions, the various solutions of this reagent "wet method."

DRY METHOD.

In a vessel, the bottom of which is covered by a layer of cotton wool thoroughly saturated with pure formic aldehyde, the specimen is placed without any preliminary washing. After 24 hours in the case of wet organs, as kidney, spleen, slices of lung, liver, etc., or one and a half to two days with larger specimens, the preparation is transferred directly to alcohol (80 to 90 per ct.); in a few minutes the original color begins to reappear and reach a maximum intensity in from six to eight hours, when the alcohol is replaced by a solution made up: R. Pol. acet. 30 parts; glycerine, 60 parts, and water, 100 parts. Under the influence of the formic aldehyde the consistency of the specimen is increased, as well as its volume (in some cases as much as 40 per cent.). The alcohol completes the hardening process and at the same time produces considerable shrinking. One has, therefore, so regulated its action that after fixing and hardening the organ remains in its natural volume with a sufficient hardness. This result may be easily obtained by repeatedly transferring the specimen from alcohol to the pol. acet. solution and back again. After finally transferring the specimen to the pol. acet. solution the latter may become somewhat discolored. In such case the specimen may be allowed to remain in the fluid for about three weeks and then transferred to a fresh, clean solution, which will remain clear indefinitely.

WET METHOD.

The modus operandi in this method is similar that that above. Good results and less difficulty are obtained with the wet method. As a fixing reagent various solutions are

used, the basis of all of which is a 10 per cent. aqueous solution of formic aldehyde. The solution may be classified as: (1) Gas-formalin solution, (2) reducing-formalin solution, (3) aug-formalin solution, and (4) salt-formalin solution.

1. Gas-formalin solution consists of a 10 per cent. aqueous solution of formic aldehyde, to which 5 to 10 per cent. hydrogen sulphide or 0.5 to 1 per cent. hydrogen peroxide is added. They are especially useful for the preservation of muscular tissue, nutmeg liver, etc. The specimen is allowed to remain in the reagent for 48 hours, then transferred to alcohol 60-80 per cent. for a few days, and lastly to the glycerine-potassium-acetate solution (glycerine 20, potassium acetate 15, water 100).

2. Reducing-formalin solutions are formed by the addition of 0.5 to 1 per cent. of such substances as hydrochinon, hydroeylamin, pyrocatechin and glucin. The author found such solutions good for the preservation of a specimen of atrophia fusca hepatis with secondary nodules of cancer.

3. Oxy-formalin solutions.—By the addition of 0.5 to 1 per cent. of pot. chloratis to 0.10 per cent. formic aldehyde solution the entire process may be much shortened. Thus a slice of pneumonic lung treated for one hour in this solution, then for 24 hours in alcohol, and then transferred to the glycerine-acetate solution, was found well preserved.

4. Salt-formalin solution.—To the formic aldehyde solution various acetates may be added, e. g., acetate of sodium, potassium, aluminum, anemonium, coledium, basium, magnesium, strontium, nickel or manganese to the extent of 3 to 4 per cent., or, if two or three of the salts be used, to the extent of a total, or 3 to 5 per cent. With such solutions it is found that the final colors of the preserved specimen are somewhat brighter than the original colors of the first specimen. The oxy-formalin solutions, on the other hand, give to the specimen a brownish color; hence it is advisable for general use to employ such combination of these as sodium nitrate 3, potassium chlorate 0.5, formic aldehyde 10, water to 100 parts. Specimens of brown atrophy of the liver or heart the oxy-formalin solution alone is best.

—Centralblatt f. Pathologie, Bd. viii, 3 and 4, 1897.

Current Medical Literature.

CHOLECYSTITIS IN ENTERIC FEVER.

V. Dungern first observes that mixed infections are very important in enteric fever, but that the typhoid bacillus may unquestionably be the cause of some complications. Severe complications involving the biliary passages are rare in enteric fever, and here the typhoid bacillus itself is very frequently the cause. As a result of the penetration of the typhoid bacillus into the gall bladder, gall stones may ultimately occur. The author is only acquainted with four cases of cholecystitis with or without calculus formation in which the typhoid bacillus was the cause. He gives short details of these four recorded cases, and adds the following one: A woman aged 46 had typhoid fever 14 1-2 years previously. Nearly five years afterward she had attacks of pain, accompanied by vomiting, but without jaundice. During the next one or two years she had many attacks, but then remained quite free from them for six years. The attacks then recurred, and a hard swelling was felt in the region of the gall bladder. This swelling was cut down upon by Kraske, and an abscess was opened and 150 c. cm. of brownish-yellow

pus evacuated. The pus was not bile-stained. Any connection of the abscess with the gall bladder was not vigorously sought for. No gall stones were found, but occasionally the discharge was stained with bile. The typhoid bacillus was found in the pus in pure culture. It was submitted to all the ordinary tests and gave the serum reaction. It is most probable that the typhoid bacillus penetrated into the gall bladder at the time of the enteric fever, but the interval of five years before the first attack of biliary colic is striking. In the last year of the six years' interval the patient suffered from a periostitis of the lower jaw, which may also have been due to the typhoid bacillus. If the above suppositions are true the typhoid bacillus retained its vitality for 14 1-2 years. The patient's blood produced immobilization and agglutination in typhoid bacilli. The typhoid infection has been known to involve the biliary system even without any intestinal lesion. The author then refers to the bacillus coli communis and its relation to suppuration; this micro-organism may even produce a disease not unlike enteric fever. The typhoid bacilli from the author's case proved themselves to be virulent when injected into animals, but the virulence was slight.

—Munch Med. Woch., June 29, 1897.

CURATIVE ACTION OF HYPEREMIA.

Bier has chiefly employed passive hyperemia in a large number of cases, especially in so-called surgical tuberculosis. The extremity is well bandaged up to the disease and then an elastic bandage is placed above the disease. Bier maintains what he has previously said about this method of treatment, and adds that, combined with conservative operations, he has seen very good results. In some of his former cases he says that the cure is so complete as hardly to show a trace of the former disease. In cases of syphilitic disease and in two of sarcoma the disease rapidly got worse under this treatment. In gonorrheal articular affections the author has seen good results in 11 cases, so as to warrant its repetition. The inflammatory manifestations and the pain rapidly disappear. He has used this treatment in rheumatism with varying results. The best results were obtained when the hyperemia was induced in a marked degree. Cases of arthritis deformans and chronic rheumatism at times showed considerable improvement; sometimes, however, it was quite useless. In a case of genuine gout no benefit was seen. Bier was induced to try the treatment by the circumstance that vascular venous engorgement confers a certain degree of immunity against tubercle. He has tried an active hyperemia by hot air and by hot water. With hot water the effect upon superficial tuberculosis is not as great as with hot air. Lupus will heal quickly if it be so placed that it can be covered by a dry cup, the engorgement thus produced bringing about a rapidly curative effect. The method can have only a limited application here. The effect of passive hyperemia upon tuberculosis is much greater than that of an active hyperemia. Hot air gives better results in arthritis deformans and chronic rheumatism than in tuberculosis. The author discusses the question of how hyperemia is able to influence local disease, and especially infective disease. Whatever the explanation may be, yet the efficacy of the treatment, in the author's opinion, cannot be doubted. The method must be properly carried out. The most important rule is that the hyperemia should never cause pain; on the other hand, it should rapidly relieve it. Thus, if the bandaging produce pain, it should be loosened. On the other hand, in order to secure success the hyperemia must be considerable.

—Munch. Med. Woch., August 10, 1897.

PAPAIN AND ITS USES.

BY ROBERT PETER, M. D.,
Toledo, O.

This remarkable vegetable enzyme has now been in therapeutic use for some years. Through the efforts of the manufacturing chemists, Lehn & Fink, of New York, it was first made known to the medical profession of the United States, and the

good reports on papain which appeared in the medical press a few years ago were all based on experiments made with their preparation.

Papain is the active principle isolated from the dried milk juice of the carica papaya (papaw juice). It occurs as an amorphous, white or yellowish white powder, soluble in water. One part will dissolve one hundred to two hundred parts of blood fibrin. Papain possesses the peptonizing properties of papaw juice in a high degree of concentration, and has the power to dissolve more meat peptone or coagulated albumen than pepsin, and in a much shorter time. It should also be noted that unlike pepsine, it is equally effective in acid, neutral or alkaline solutions, and that it has therefore the digestive action of both pepsin and pancreatin. It should be further remembered that besides its digestive action it also prevents fermentation of food and increases the digestive juices. By virtue of these properties it has been given with considerable success in the treatment of the many gastric and intestinal troubles, proving very valuable in dysentery and chronic diarrhea of infants.

One of the first uses that has been made of papain was to employ its solvent powers in the solution of false membranes of diphtheria. For this purpose it is used in a five per cent. solution, brushed or sprayed on affected parts. Experience characterizes it as the best and most rapid solvent for diphtheritic membrane. It has also been given internally in these cases in connection with cinchona.

Papain has been very effectively employed as a remedy for tenia. For this use it comes highly indorsed by Bartholow. He thinks that it is most probable that the papain has a toxic influence upon the worm, causing it to relax its hold on the mucous membrane. It should be given in ten-grain doses, three times a day, followed by castor oil.

Locally, it has been satisfactorily employed in cases of lupus vulgaris, and in cases of crustaceous eczema. In these cases the morbid tissue is broken down in solution, thus removed and a clean surface secured. It has hence also been used in cancerous tissues.

Papain is the remedy par excellence in diseases of the digestive tract. Its extensive digestive action throughout the entire digestive system and its good, healthy action upon normal mucous membranes, warrant its manifold application in all diseases of the stomach and bowels. It is therefore needless to enumerate the many conditions such as dyspepsia, gastric and intestinal catarrh, etc., etc., in which we cannot do better than employ it. Now that we are in the midst of the season of heat, most trying to infancy, its use may come in well in the summer complaints, and if need be, combine it with other appropriate remedies. It may be given in doses from one to five grains; children in proportion, according to age.

—Toledo Medical and Surgical Reporter.

THE SERUM DIAGNOSIS OF SCARLET FEVER.

Bates Block has considerably extended his researches into this subject (see Epitome, 1897, i, 200). Of 22 cases of typhoid, the serum of which was examined, 18 gave an unmistakable reaction, and three a slight one, two of these giving a marked reaction by the dry method. In many of the cases the microscopic test was used with one in sixteen blood serum; this was invariably satisfactory, but is inferior to the microscopic, as taking more time and offering greater liability to contamination. Cultures taken from the agglutinated masses grew vigorously, showing that the bacilli had not been killed. By the dried blood method specimens from 39 cases of typhoid were tested and 85 examinations made. In 36 cases the reaction at some time during the disease was sufficient for diagnosis, in three, two of which were doubtfully typhoid, it was not. Of the 85 examinations 72 were sufficiently marked for diagnosis, 13 not; in three it was entirely absent, either at a very early or a very late date. In cases tested by both methods the differences were found to be very slight. By

both considered together, 107 tests were made in 46 cases of typhoid fever; the percentage of failures in cases was 6.5, in tests 15.88, most of the latter being at a very early or very late stage of the disease. The reaction was found to increase gradually as the disease advanced and to decline with defervescence or during convalescence. The author considers its absence as reasonably certain evidence that a disease is not typhoid fever. Confusing results were obtained with three comatose patients, one of whom had pernicious malaria, one diabetic coma, and the third probably scarlet fever; the serum of each of these, diluted sixteen times agglutinated typhoid bacilli. Differences were noted in the reaction of active blood upon various typhoid cultures, and these differences appeared to be constant. Finally, as to time, in the case of serum diluted with 16 parts of bouillon, thirty minutes suffice, while if the dilution is to the extent of one in fifty, two hours will, as stated by Welch, be required.—Journ. Amer. Med. Soc., July 3, 1897.

PULSUS PARADOXUS.

C. Gerhardt describes the pulsus paradoxus occurring on one side, and an unequal number of pulse beats in the arteries of the arms. A pulse unequal in various parts of the body, both in force and number of beats, has been styled the pulsus differens. Gerhardt says that he has seen such a case for the first time only recently. Here there were the conditions of the pulsus paradoxus and of the pulsus differens, or a one-sided pulsus paradoxus. The author drew attention many years ago to the intermission of the pulse during inspiration in the third stage of group, and v. Rauchfuss has looked upon this as an indication for tracheotomy. The difference in the radial pulses has been very generally recognized as a special sign of aneurism, but it is more correct to regard it as a sign of endarteritic changes in the aortic arch, leading to a narrowing of the orifices of the large arteries. Cases, however, are few in which the pulsation of the radial artery cannot be felt at the wrist during inspiration. The author relates a case in a woman aged 66 with mitral disease, bronchitis, and possible renal disease. The pulse, 80 to 90, was irregular and small. The radial brachial and carotid pulses were less on the left than on the right side, but the femoral pulses were equal. During the height of inspiration the left radial pulse became smaller, and at times could not be felt. A table is given showing that at different times of the day the pulse beats were more frequent on the right than on the left side, and that the pulse rate itself in the same artery also varied. Here it must be taken that at the origin in the aortic arch of the left subclavian and carotid arteries there was a narrowing, due in all probability to atheroma. The patient was breathing at 24 to 40 per minute, so that not every respiration was deep enough to cause a disappearance of the radial pulse during inspiration. The unequal pulse-rate in the radial arteries persisted in spite of treatment with digitalis, etc.—Berl. Klin. Woch., January 4, 1897.

THE DURATION OF VACCINAL IMMUNITY.

J. Jasiewicz has gathered together some statistics which seem to show that the immunity from vaccination in infancy lasts a much shorter time than is commonly supposed. In the case of 23 children under 6 years of age vaccination was successfully performed in seven, 35 per cent. Jasiewicz, therefore, recommends more frequent revaccination in childhood, and especially in early childhood. He believes that it protects from other infectious diseases as well as variola.—Journ. de Clin. et de Therap. Infant., July 29, 1897.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

THE TREATMENT OF FRACTURE OF THE LOWER JAW.

Hansy reports three cases of fractured jaw in which he applied with success a strong wire around all the teeth, and twisted both ends together in front of the symphysis. To prevent this ligature from slipping, the anterior and posterior parts were fixed by loops of very thin wire, such as is used for flowers, which were passed between the teeth and firmly secured. The advantages claimed for this method are that the patient is able to separate the jaws without disturbing the fracture, and to chew soft food. The patients treated by the author were able to retain the metallic splint until consolidation had been effected, and did not suffer from any of the troubles—swelling of the gums, loosening of teeth, ulceration of the tongue—which have been regarded as serious objections to the use of the wire ligature. This plan of treatment is of course inapplicable to edentulous subjects.—Mahe (Revue. de Chir., October, 1897) advocates very strongly the use of Kingsley's apparatus in cases of fracture of the lower jaw. This consists of a dental splint of vulcanite rubber, to which are attached two curved arms of steel, which, emerging from the mouth, extend over the cheek to the angle of the jaw on either side. These are fixed by a sling of gauze passing beneath the chin from one arm to the other. This apparatus, which was devised about twenty years ago, has been applied with complete success by Make, who states that by its simplicity and the ease of its construction, by the slight amount of discomfort it causes, by the freedom it affords to the temporo-maxillary articulation, and, consequently, the possibility it permits of an almost normal alimentation, and by the perfect apposition of the fragments it assures, undoubtedly constitutes a method of rendering marked service in most, if not all, of the cases of fracture of the lower jaw.—Centralbl. f. Chir., No. 40, 1897.

APPENDICITIS AND INTESTINAL OBSTRUCTION.

De Quervain calls attention to the fact that the appendicitis may exist without giving rise to any of the usual symptoms, and may be followed by intestinal obstruction, indistinguishable clinically from ordinary cases of ileus whose origin can be discovered only by operation. He reports such a case where all the symptoms of intestinal obstruction were present, and where perityphlitis was not revealed in any way, even on examination per vaginam and per rectum. After enemata, electricity applied by Boudet's method, etc., had failed to overcome the obstruction, laparotomy showed that the actual cause of the ileus was a kinking of a coil of the ileum, with adhesion of its proximal and distal portions. This adhesion was evidently due to the fact that this coil had recently been near the appendix, which, in spite of the absence of symptoms, was perforated near its insertion into the cecum, which was covered with fibrin at this spot. The patient recovered.

—Rev. Med. de la Suisse Rom., May 20. 1897.

ANTISTREPTOCOCCUS SERUM IN NEW GROWTHS.

Ziemacki has thus treated 20 cases of inoperable malignant new growth. The serum was obtained from goats

and horses, the immunization being carried out by the injection of living cultures of the streptococcus; for this reason care must be taken to see that the serum is free from this microbe before use. The dose employed varied according to the condition of the patient. Usually one c.cm. was given at first and gradually increased. Of the 20 cases, six were examples of sarcoma and 14 of carcinoma. In no case was the treatment efficacious, nor did it retard the growth of the tumor. Of the 20 cases, 12 died, three were in a hopeless condition and in five the result was unknown. The author cannot confirm the statement that the ulcerating surface rapidly cleans. In one case of lympho-sarcoma a rapid dissemination about the original focus was observed. The only beneficial effect noted was a lessening of the pain. The author contends that the serum injections may be harmful, and he especially instances cases in which unpleasant symptoms (cyanosis, etc.) arose. He concludes that this serum treatment is contra-indicated in weakly and cachectic individuals. It produces no good here and may do much harm. In strong individuals the serum may be used when it may lessen the pain, but offers no hope of cure. The author has also treated a few cases with serum from horses which have been previously treated with large doses of arsenic, but with no noteworthy results.

THE TREATMENT OF PENETRATING WOUNDS OF THE ABDOMEN.

Vulliet, on the basis of an analysis of 335 cases of penetrating wounds of the abdomen published since 1890—that is, during the antiseptic period—77 of which were treated by the expectant method and 258 by laparotomy, has come to the following conclusions: In the presence of wounds of the abdomen, whether gunshot or caused by stabbing or cutting instruments: 1. The wound must be enlarged to establish the fact of penetration (probing is insufficient). If this is found exploratory laparotomy must be performed at once. 2. It is impossible to decide from the symptoms whether the intestine is perforated or not, slight cases being often accompanied by symptoms of peritonitis, which may be absent in a case of multiple perforations. 3. Sure signs of perforation of the intestine, such as fistula or evacuation of the bullet per rectum, are very exceptional. 4. Exploratory laparotomy is without danger. 5. Spontaneous healing of intestinal perforations without septic peritonitis is rare as shown by statistics, and more especially by experiments on animals. 6. By operating early the surgeon tries to prevent the occurrence of peritonitis, and does not wait for symptoms. Peritonitis once established, death is almost certain with or without operation. 7. The operation, though often long and difficult, must not be credited with the deaths due to the gravity of the lesions, and it has saved numbers who would have certainly died if left to themselves. The results of laparotomy have recently much improved. 8. If seen for the first time forty-eight hours after the infliction of the wound, and no abdominal symptoms are present, perforation of the intestine can be excluded almost certainly; if signs of peritonitis are present abdominal section and washing out give the only remaining chance of recovery. Deaths in the latter case are due to the expectant treatment and not to the operation. 9. Shock is no contraindication to operation; on the contrary, it is often caused by severe hemorrhage, and the fear of the patient dying on the table must not preclude an operation which has saved life. In such cases stimulants and intravenous saline injections must be used freely. 10. In most cases the incision should be medium and long; this makes exploration more easy and rapid. The cavity should be washed out and drained. 11. The above conclusions apply to civil life when all antiseptic precautions are possible; in war, owing to a lack of experience, the question of operation versus the expectant treatment must be considered still unsettled.

—Rev. Med. de la Suisse Rom., May, June and July 20, 1897.

Current Literature in Obstetrics and Gynecology.

EXTRACTION OF THE DETACHED FETAL HEAD.

Audebert has found serious difficulty in extracting from the uterus the fetal head which has been detached from the trunk. The difficulty is due largely to the mobility of the head, but also often to the contraction of the cervical canal and to deformity of the pelvic brim. In a case of which he gives the details the head became accidentally separated during prolonged traction on the body in a breech presentation. The labor was at the sixth month. By means of two pairs of uterine dressing forceps the head was fixed, one pair being attached to a piece of loose skin and the other to the soft tissues of the neck. It was then easy to extract the head by means of a pair of abortion forceps. Audebert then curetted the uterine interior, and the patient made a good recovery. The preliminary fixation of the head by means of narrow and long catch forceps is of great value in aiding extraction.
—Journ. de Med. de Bordeaux, August 8, 1897.

FLESHY-MOLE TWIN: NERVOUS COUGH IN PREGNANCY.

Voigt was called in to see a woman six months pregnant and 30 years of age. For a few months she had been much troubled with violent fits of coughing, though no physical signs of pulmonary or laryngeal disease could be detected. She had grown very nervous and excitable. A rigor, with rise of temperature to 104 degrees F., had occurred. Voigt diagnosed pregnancy with one living fetus. There was marked tenderness of the uterus to the left inferiorly. The spleen was swollen. There was no symptom of abortion, but that accident occurred two days later, and a living child, which died in six hours, was expelled spontaneously. A seemingly healthy placenta was delivered, and the uterus contracted well without hemorrhage. The local uterine tenderness passed off. Yet there was a temperature of 104 degrees at night, and the spleen continued swollen. On the fourth day a little hemorrhage set in, and on examining Voigt found a fetid bright red mass between the patient's thighs; its surface was villous, and it was a typical fleshy mole. The fever and the enlargement of the spleen steadily decreased and disappeared, whilst the fits of nervous coughing ceased at once and for good. The patient gained flesh and soon became strong again. Voigt has failed to find any record of twin pregnancy where one of the ova was a fleshy mole, the other a well-developed fetus.—Prager. Med. Woch., No. 23, 1897.

STATISTICS OF ECLAMPSIA IN PREGNANCY AND LABOR.

Halbertsma has observed 109 cases, 49 being closely analyzed. Of these 31 suffered during pregnancy, and 18 at the beginning of labor. In seven eclampsia set in before the eighth month of pregnancy, all mothers saved, but six children lost; in the case where the child was saved incision of the os (Duhrssen's practice) was undertaken. Of eclampsia later on, Halbertsma classes five as "light cases," one "moderately severe," one sufficiently peculiar to be set aside from the rest (spontaneous delivery, pneumonia, gangrene of the lung), and 17 as definite "heavy cases." Out of the 17, two are rejected on account of some uncertainty about treatment, whilst in seven

neither Caesarean section nor Duhrssen's incision was practised, and all died, whilst in eight when one or other of these operations was undertaken six were saved. Halbertsma here notes that one death followed Caesarean section, the first he ever performed, many years ago. It was done before the days of antiseptics and precise suturing of the uterine wound; six of the 18 cases of eclampsia beginning with labor are classified as "light," twelve as "severe," no less than three-quarters being lost. None of the unforable cases underwent Caesarean section or incision of the cervix, and none received timely assistance from more common artificial resources. In one the pelvis was contracted, one patient was an old primipara. There remain three cases that were saved, in two incision of the cervix was practised, in the third chloroform and morphine were administered, and when the os was completely dilated the forceps was applied. Halbertsma favors this line of treatment, but states that should it fail the continuance of the fits will be more deadly to mother and child than Caesarean section.—Nederlands Tijdschrift van Verlosk. en Gynaek; eighth year, 1897, No. 2.

Miscellany.

CIRCULAR ANNOUNCING THE DEATH OF PASSED ASSISTANT SURGEON W. D. BRATTON, U. S. MARINE HOSPITAL SERVICE.

To the medical officers of the U. S. Marine Hospital service:

I have the painful duty of announcing to the officers of the service the sudden death of Passed Assistant Surgeon William D. Bratton, which occurred at Sabine Pass, Tex., on the 2d instant, under peculiarly distressing circumstances.

In the pressing need of medical officers for active work during the present yellow fever epidemic in the South, Passed Assistant Surgeon Bratton, though an invalid, and therefore on waiting orders, promptly volunteered his services to meet the emergency, and the tender was accepted in the spirit in which it was made. He was ordered to Sabine Pass to assume charge of service matters relating to the quarantine service at that port, where he arrived and reported himself on duty the 28th ultimo. On the 1st instant he had been superintending the disinfection of a vessel, and returning to the ship to reassure himself upon the work done, he fell through a ventilating hole, striking his head on an iron knee, producing concussion of the brain. He remained undiscovered for several hours, and when found was unconscious, and remained so until death occurred, eighteen hours after the unfortunate accident.

William Du Bose Bratton was born in Fairfield County, South Carolina, June 23, 1860, the son of General John Bratton, of Winnsboro, in that State. His early education was acquired in Mt. Zion School, Winnsboro, and at Abbeville, S. C. In 1874 he was matriculated at the Carolina Military Institute, at Charlotte, N. C., remaining two years, and then entered the University of the South, at Sewanee, Tenn., where he received the degree of B. S. in 1880, after a three years' course. He at once began the study of medicine, and was graduated at the Medical College of South Carolina, March 1, 1884, and for the year following was house surgeon at the Charleston City Hospital.

He was commissioned as assistant surgeon April 1, 1885, and assigned to duty at New York. His subsequent stations while in that grade were San Francisco, Cal., as medical officer of revenue cutter Corwin for service in Alaskan waters, and then for temporary duty at Port Town-

send, Wash. He was commissioned a passed assistant surgeon April 2, 1888, and again assigned to duty as medical officer on the revenue cutter Bear for service in Alaskan waters. In May, 1889, he was ordered to duty in command of the service at Portland, Ore., where he remained two years, and was then assigned to duty at Chicago, Ill. In 1893 he was placed in command of the service at Buffalo, N. Y., where he remained till January 9, 1894.

In the fall of 1893 he first became aware of a condition of his health, which gradually disclosed a tuberculous character, and after the bureau had been officially informed of it, he was sent to Wilmington, N. C., for its favorable climate, where he remained several months, doing meanwhile temporary service at Delaware Breakwater Quarantine, but later he was placed on "waiting orders" (January 1, 1895), taking up his residence in Arizona, and finally at Albuquerque, N. Mex., to obtain the advantages of the Southwestern arid region. After a two years' residence there he reported, in March, 1897, his gradual return to a state of health, which justified him in asking for an early restoration to active duty, for further delay was advised in order that he might have the benefit of a longer residence, and, if possible, a permanent cure.

Passed Assistant Surgeon Bratton, during the period of "waiting orders," became much interested in the climatic treatment of consumptives, and wrote several reports on the arid region of the Southwest as the best locality for such work, recommending the establishment of a sanitarium in that section for the treatment of patients of this service suffering from the disease.

His literary and scientific attainments were of a high order, and his studious habits and keen faculties enabled him to maintain in the service a reputation for unusual professional knowledge and skill in practice. Officially, devotion to duty was always a paramount consideration with him, and his conscientiousness in respect thereto was a marked characteristic of his work.

Personally, he was of modest and reserved manner, yet frank and manly in his demeanor, and actuated by a high sense of honor in all relations with his associates. He was in every respect a noble officer.

Respectfully yours,
WALTER WYMAN,
Supervising Surgeon-General, H. M. S.

ILLINOIS STATE BOARD OF HEALTH.

At the regular quarterly meeting of the Illinois State Board of Health, held at the Great Northern Hotel, Chicago, October 5, 1897, the following resolutions were passed:

Resolved, That after May 1, 1898, all non-graduate applicants for license to practice medicine and surgery, who are examined in accordance with the provisions of the Medical Practice act, in addition to the requirements already exacted, must present as evidence of a satisfactory preliminary education, either,

1. A diploma or certificate of graduation from a high school.

2. A certificate of having passed the matriculation examination to a recognized literary or scientific college.

3. A certificate of successful examination by the faculty of any reputable university or college of arts or science (not members of a medical college faculty), by the State Superintendent of Public Instruction of Illinois, or by the principal of a high school in Illinois, in the following branches: English grammar, arithmetic, elementary physics, United States history, geography and Latin (equivalent to one year in a high school).

Each candidate will also be required to present a certificate from a medical college in good standing with this Board, attesting that the applicant has,

1. Pursued the study of practical anatomy in said college for at least one term and has made dissections of the entire cadaver.

2. Taken at least one full course in operative surgery and practical obstetrics.

3. Personally attended six or more cases of labor.

Bacteriology has been added to the subjects of the non-graduate examination.

ROYAL COLLEGE OF SURGEONS OF ENGLAND
16 DEC 97
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The Times and Register.

VOL. XXXIV. No. 11. PHILADELPHIA AND BOSTON, DEC. 4 1897 WHOLE No. 951.

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Original

ABSTRACT OF PAPER ON SURGERY OF THE GALL-BLADDER AND DUCTS.*

BY J. McFADDEN GASTON, M. D.,
Atlanta, Ga.

A division of the bile channels connected with the liver, into the biliary tubules, the hepatic, cystic and common ducts is generally recognized by surgeons.

The first-named collect the bile from the acini in the respective lobes of the liver and carry it through two channels which are included with the hepatic arteries and portal sinuses by the capsule of Glisson in the transverse fissure. These branches are united to form the hepatic duct which meets the cystic duct at an inclination varying slightly from a right angle, and they coalesce in the common bile duct, which enters by an oblique opening into the duodenum about two inches from the pyloric orifice of the stomach.

It is requisite for the successful issue of any operative procedure that a communication with the alimentary canal shall be established, and the temporary discharge of bile by an external opening, with a view to subsequent restoration of its natural channel and ultimate closure of the

*Presented to the Southern Surgical and Gynecological Association, at its meeting on November 9, 1897, in St. Louis, Mo.

fistulous outlet, is not liable to the grave consequences of a permanent waste of the biliary secretion.

When the common bile duct remains impermeable an artificial connection of the gall-bladder with the duodenum has been proposed, as a feasible recourse for returning the bile to its appropriate destination in the alimentary tube. The claim of this cholecysto-duodenal communication to consideration rests chiefly upon the great importance of the bile in the digestive and assimilative processes, during the passage of the food through the upper portion of the small intestine.

The entire removal of the gall-bladder in cases of atrophy or degeneration of its tissues has been resorted to without serious interference with the biliary functions, except that the bile flows directly through the common duct into the duodenum instead of having a portion reserved in the storehouse by the wayside for future use.

There is, of course, a departure from the normal state in the delivery of bile continuously into the duodenal canal, instead of the physiological proceeding of retention for certain periods in the sac, and then being poured out as requisite for intestinal digestion. Yet it is inferred that under the change of relations in the bile-producing act the discharge adapts itself to the natural demand for it, and experiments have proven that the ductus communis becomes endowed with a retentive power by the spontaneous contraction of its outlet for certain periods in the intervals of digestion.

The continuous discharge of bile by a direct outlet from the gall-bladder into the duodenum, when the common duct is entirely occluded, certainly fulfills the ends of its production more satisfactorily than the formation of a cutaneous fistula for its escape externally, by which its influence upon the system is completely lost. At least this is the nearest approach to a normal supply of the biliary secretion, which can be provided under the circumstances, and thus relieves all the embarrassments of the situation.

When the common duct becomes partially or entirely obstructed at its outlet, while the hepatic and cystic ducts are open, there is an accumulation of bile in the gall-bladder. This may lead to a greater or less dilatation of its walls, with inspissation of the fluid contents or a deposition of concretions. Yet there is generally a marked diminution of the secretion of bile following the arrest of its discharge into the duodenum, and eventually the liver ceases to yield any secretion, so that a stasis exists in the bile-producing process.

It is a well-ascertained consequence of an occlusion of the cystic duct for any considerable period that various abnormal collections in its cavity ensue, such as glairy mucus, pus or seropurulent exudations. The presence of gall-stones in the ducts or intermixed with the accumulation in the sac may complicate such cases, and the simple evacuation of the contents does not ordinarily afford permanent relief.

The prime question for consideration is the praticability of adopting any measure of treatment which shall restore the function of the liver and preserve the office of the gall-bladder. In case the derangement should prove to be irremediable excision of the gall-bladder is indicated.

The dissection of the adherent layers of the sac from the under surface of the liver does not seem to be called for in excision of the gall-bladder. In one of my canine experiments the outer wall of the sac underwent disintegration, while the adherent tissue was still firmly united to the under surface of the liver. Since the separation of this layer from the proper structure of the liver gives more trouble than any other step in the operation it may be left attached after trimming off all the loose wall of the gall-bladder, and thus materially simplify the surgical procedure in cholecystotomy.

There is doubtless a tendency on the part of the advocates for different operations to undervalue the final cause in the respective cases. Excision or extirpation of the gall-bladder is not expected to supply the

place of other processes for correcting its disorders, but is a dernier ressort in view of the inadequacy of any means for restoring the functions of this organ and for rehabilitation of the surrounding structures.

When the gall-bladder and cystic duct become obnoxious to the adjacent tissues, so as to cause local disorders and general derangement of health, it is the legitimate province of surgery to get rid of them forthwith by extirpation. They no longer subserve the ends for which they are provided, and constitute an abnormality in the animal economy. Their removal is therefore rational and philosophic, in like manner as the separation of any other offending member from adjacent structures. This principle is generally adopted for the obliteration of cysts, and when degeneration of structure with decomposition of the contents of the sac is found in connection with occlusion of the gall-bladder, it belongs properly to the category of cysts, as it has no longer any of the capacities of a receptacle of the bile. Instead of retaining an offending member to propagate trouble to other parts it is the dictate of common sense and sound judgment to sever its connection with the body.

This operation is not warranted in cases of temporary obstruction of the cystic duct, which admits of relief by mechanical or other means, excepting when disorganization of the structure of the sac is imminent. In permanent obliteration of the cystic duct, though the structure of the gall-bladder up to the time of an exploratory operation be intact, it is reasonable to infer that degeneration will ensue, so that it becomes a legitimate proceeding to excise it.

CHOLECYSTOTOMY.

Under this designation are included such operative measures for the relief of disorders of the gall-bladder as may be undertaken without excision of its tissues, independent of puncturing or incising the sac through the walls of the abdomen for the discharge of fluid collections.

Hepatic abscess originating in the organ, or resulting from dysentery, does not fall within the scope of this paper, yet when the biliary channels become affected from obstructions, with the presence of inspissated bile or concretions in the gall-bladder, a consequential abscess may form in the liver that calls for consideration. Ziegler states that the irritant will first affect the walls of the ducts and their surroundings and set up inflammation there. Stones formed in the gall-bladder and in the ducts themselves are frequently discharged into the intestine through the common duct. But if one of them lodges or lingers in the duct retention of the bile ensues, and this may give rise to dilatation of the ducts and to infiltration of the liver with bile. The liver tissue may thereupon become degenerate or inflamed, while the parts around the impacted stone become also inflamed or even ulcerated. When such an inflammation of the ducts persists for a long time or leads to a persistent retention of the bile the inflammatory changes extend to other parts of the liver. Brown or yellow granular biliary concretions appear in the interlobular tissue and within the lobules. The liver cells perish at various points, and inflammatory infiltrations appear within the lobules and terminate in abscess or fibroid induration.

Independent of this record of the pathological changes connected with biliary derangement, it has been noted by other trustworthy observers that the closure of the natural outlet of the bile brings many troubles in its train. Most frequently the progress of dilatation in the gall-bladder, with the consequent suppuration and disorganization in the surrounding structures, indicates the serious nature of the disorder in these cases.

In the absence of fistula and adhesions, when the history, progress of the disease, examination of the patient, and above all the presence of a biliary tumor and exploratory puncture, reveal the presence of biliary calculi, Boeckel recommends cholecystotomy, but he holds that this operation is not otherwise justifiable. On the contrary it is clear that we arrest the progress of the

inflammatory disturbance in the tissues by evacuating the distended gall-bladder. Delay in undertaking the appropriate measure of relief brings disintegration of structure, which undermines the recuperative powers of the system, and this tendency to disorganization may be arrested by an early recognition of the nature of the case, and a timely resort to a judicious operative measure. The earliest report on record of a radical operation for relief of the gall-bladder is that of Bobbs on June 15, 1867, upon a lady 30 years old. The gall-bladder was emptied of its limpid fluid contents and several solid concretions, the incision in its walls being stitched and the ends cut close, while the sac was returned into the abdominal cavity. Her recovery was rapid and without an untoward symptom.

The practical outlook was not improved by the untoward results of the radical proceedings of Sims and Keen in their cases of dropsy of the gall-bladder. The condition of the ductus choledochus is not reported in the autopsy of Keen's case, but it is inferred from the post-mortem examination in the case of Sims that obstruction of the common duct did not exist.

According to Musser there are four pronounced conditions which are dangerous as sequences of biliary obstruction, and which may be looked upon as indications for operative interference. They are jaundice, a tumor in the right hypochondrium, presumably an enlarged gall-bladder, frequently recurring paroxysmal pain, and symptoms of suppuration.

The causes in general of stenosis in the bile-ducts are considered to be three: 1. Foreign bodies within the ducts (gall-stones, parasites, etc.) 2. Diseases of the walls of the ducts (a, congenital; b, adhesive inflammation or cicatrization of ulcers; c, parahepatitis). 3. Tumors, etc., external to the ducts.

The enlargement of the gall-bladder is generally pyriform in shape, or it forms a semi-globular or globular tumor and is usually movable, tender, elastic and fluctuating, but may have different qualities, and the intestine is never in front of the growth.

Acupuncture and aspiration in advance of opening the abdomen are advocated by Keen for the diagnosis of affections of the gall-bladder, but the resort of such exploratory punctures are not sustained by general experience. Yet it is well known that other prominent men concur in the propriety and expediency of this course, and Bartholow claims that this diagnosis can be reduced to an absolute certainty, while Harley insists strenuously upon its safety and efficiency. Being satisfied that this preliminary step is not requisite for the practical management of such cases and that unforeseen risks attend the modes of exploration, while safer means of investigation may be relied upon for a correct diagnosis in this class of disorder, I cannot acquiesce in this measure for the detection of gall-stones in the sac or for the removal of its fluid contents, in preference to an exploratory incision and examination with the finger. While recognizing the preliminary process, exploratory operations are sanctioned by Keen, and if the ascertained conditions warrant further steps, to be followed by cholecystotomy. He inculcates as a rule that the incision should be made over the centre of the tumor and parallel to the free border of the ribs. The greater facility of access to the tumor overbalances, in his estimation, any less hemorrhage from the linea alba. It should be sufficient for exploration, being made about three inches in length, and enlarged, if need be, afterward. All bleeding should be arrested by hemostatic forceps or catgut ligatures before opening the peritoneum. This being done by incision upon a directory to avoid wounding the sac, two fingers should be used, or if necessary the whole hand, to explore the condition of the various abdominal organs and learn the exact nature, attachment, etc., of the tumor, and so far as possible the character of its contents. The cystic and common ducts are to be examined to determine the presence and situations of gall-stones, with their size, shape and mobility. If any be found in the

ducts the suggestion of Handfield Jones to endeavor to push them into the duodenum should be tried. This failing, we should endeavor to push them back into the gall-bladder, as this part of the duct has already been dilated by their onward passage.

It is not always practicable to find all the stones at the outset, and those not encountered at the operation have escaped subsequently or have been extracted by the operators. This shows the propriety of exploring the cavity of the gall-bladder and the cystic duct on dressing the wound during the first week after an operation.

The first case of Parkes is very instructive touching this point, and in his graphic account of it on January 27, 1885, I was informed that an exploration of the cavity of the gall-bladder on the occasion of the operation failed to find any stones in the bladder. On the second day the dressings were charged with a profuse flow of greenish-colored fluid from fistula. On the fourth day again dressed; while probing the bladder this day he detected and removed two stones. On the seventh day he found and removed five stones, one as large as the end of the finger. None were found subsequently.

He was satisfied that a contraction of the common duct existed, rendering it too small in calibre to carry off the biliary secretion, and that for the time being the fistula would have to be maintained open.

Had this been evident on the occasion of passing the sound Parkes might doubtless have adopted the suggestion at page 380 in the October number of Gaillard's Journal that "in case any communication with the duodenum exist, however small it may be, dilatation of the ductus choledochus should be attempted."

Notwithstanding the assurance of Parkes that his finger in the abdominal cavity guided the sound through the cystic and common ducts into the duodenum, and the statement of Sims in the autopsy of his case, that "Ganal was able to pass a probe from the gall-bladder through the ductus communis choledochus into the duodenum," I observe at page 100 of the Medical Bulletin for April, 1885, that Bartholow questions the practicability of catheterization and consequent dilatation of these ducts. While I encountered this difficulty in the post-mortem of a dog, reported at page 83 of the Southern Medical Record, for March, 1885, numerous other examinations were made in dogs, presenting no obstacle to the passage of a sound from the gall-bladder through the cystic and common ducts into the duodenum. While a straight metallic probe may not pass readily from the cystic into the common duct, there is no embarrassment in carrying a curved sound or an elastic bougie from the gall-bladder into the duodenum, and hence in cases of partial constriction of either duct the successive use of graduated sounds or bougies may be relied upon for dilatation of the passages.

With the lights before us it is clear that an effort should be made to overcome temporary obstructions of the ducts, and if concretions exist which cannot be moved in either direction by pressure from without the canal with the fingers, an effective recourse is found in adopting the expedient of Tait for crushing the masses with padded forceps, and leaving the fragments to be flooded out by the bile. This suits cases not requiring incision of the sac, but he is in favor of establishing a biliary fistula temporarily, and a large finestrated drainage-tube should be inserted, while the whole abdominal wound is securely closed excepting at the opening for the attachment of the incision in the sac. A compress and bandage should be used to obviate any tendency to ventral hernia after the operation.

Keen also regards the creation of a biliary fistuala as the better practice, yet he holds that in case a probe could be passed into the duodenum with a reasonable assurance that all stones have been removed, closure of the gall-bladder by Gely's suture or otherwise might be done with propriety.

In comparing the different measures adopted by surgeons for the relief of a distended gall-bladder, we

shall find that their relative advantages depend upon the greater or less probability of restoring the bile to the intestines.

Whatever may be the properties of the bile, it would seem to have been designed for a useful purpose by admixture with the chyme soon after leaving the stomach, and in combination with the pancreatic secretion enables the lacteals to take up the nutritive elements of the food. While serving as an antiseptic, it also promotes the peristaltic action of the intestines.

If a stone remain in the cystic duct the sac will be refilled with its own secretion, and if in the common duct by bile; but should all the stones be removed and the ducts be pervious, the fistula will soon close under the use of drainage through the duct into the duodenum.

Should the bile be certainly restored to its natural channel on the occasion of an operation, the closure of the incision in the sac and dropping it into the abdomen, with complete suture of the external wound, are advisable.

Besides the case of Bobbs, in which only one stitch was used to close the incised sac, those of Courvoisier and Bernays, operated on by this method, have proved entirely satisfactory. Even the fatal case of Meredith, in which the incision of the gall-bladder was closed with the continued suture and dropped into the abdominal cavity, proved the feasibility of immediate closure under favorable conditions. In the succinct report of it forwarded to me February 11, 1885, the author states that this patient died in 48 hours with suppression of urine. "At the autopsy the incision in the gall-bladder was found securely closed, and quite impervious to fluid."

The case of Dr. Courvoisier died from pneumonia two and a half months subsequent to the operation, and the autopsy showed a perfect union from the suture of the incised wall of the gall-bladder.

There are some cases, in which complications exist, that preclude the completion of an operation which has been undertaken, such as extensive disorganization, the agglutination of tissues or the evidences of malignant disease.

When the outlet of the common bile-duct is permanently closed, and the bile finds its way from the hepatic duct through the cystic duct into the gall-bladder, the most philosophic proceeding is to effect a direct passage of the bile from the gall-bladder into the duodenum.

In my first series of experiments upon dogs for testing this union of the gall-bladder and duodenum a circular row of catgut continuous suture attached the serous membranes around an elastic ligature connecting the two walls. This was done under the impression that it was requisite to excite adhesive inflammation, by which the surfaces should become agglutinated. But it was productive of undue disturbance, and in the last case of that series it was observed that sufficient inflammatory action ensued from the insertion of a single stitch of silk thread to unite the walls of the gall-bladder and duodenum.

With the further observation that this loop cut an opening between the two cavities, in case an incision be made into the sac for exploration, it may be closed by Lembert's suture separate from the parietes of the abdomen; and the external wound may then be sutured throughout without any provision for drainage, as the bile passes very soon through the apertures of the thread and ultimately through the fistula.

(To be Continued)

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

MYXOMA IN DEGENERATIVE CHANGES—FIBROMA.

In fetal development, myxomatous elements appear immediately on the stage of advance from the primitive lymphoid or medullary.

The definite, structural arrangement which stamps the histologic character of this tissue consists of three things—the first, the widely fenestrated reticulum; the second, the protoplasmic corpuscles, and third, the mucoid character of the basis substance.

The morphologic features, with comparatively unimportant modifications, are characteristic of all anatomic structures, and in the parenchyma of all neoplasmata of this type. This tissue being of a succulent, spongy quality, is highly vascular, the veins greatly outnumbering the regular proportion of arteries; hence, although mucoid tumors bleed on a trifling irritation of their surface, a considerable loss of blood from the periphery is rare, except those lying under the endometrium.

In those growths of long standing, resting on osseous surfaces and which freely intermingle with the mucous membrane above and the periosteum underneath, the arterial supply is more abundant. These tumors are essentially benign, inasmuch as they rarely compromise life or interfere with function.

Their presence is chiefly undesirable because of their situation, in blocking passages and, as in the uterus, provoking irritation and exhaustive hemorrhage.

They possess one of the attributes of malignancy which we witness in no other class of benign growths; unless their extirpation is radical, viz., they have become chronic.

Myxomatous or colloid transformations is one of the most frequent degenerative changes that we encounter in all large growths, whether they are malignant or not. The sessile or pedicular blood trunks fail to convey an ample nutritive supply; scattered surface and central zones of the parenchyma become gradually avascular; the zymic ferment, heretofore dormant in the stroma, now commences the work of nonputrescent disintegration; a reversive action is in progress. This process may begin in isolated insular areas, which gradually enlarge.

Simultaneously with this multiple augmentation of the loculi the more highly organized, circumjacent, histologic structures are encroached on, when atrophy and resorption progress, by the ever encroaching advance of the newly invaded.

In reality the existence of the massive tumor is threatened, by ingress of others, whose office is to arrest its advance and reduce it to such elements as will readily return to the absorbents and circulation.

One of our latest authors on oncology has made the statement that "a tumor once formed remains for life." This would imply that surgical extirpation is the only rational and radical mode of tumor treatment. But the clinic history of too many growths will prove this is untenable.

Certainly, with few exceptions, myxomata may be dissipated without the scalpel; and central mucoid or colloid degeneration will conclu-

sively demonstrate that any benign tumor, not the occasion of physical distress, may in time quite, or wholly, disappear of itself.

These disintegrating, interstitial changes are most frequently observed in those benign growths so often witnessed in the internal genitalia of women, especially in so-called myofibroma of the uterus, which everyone knows undergo the most remarkable fluctuations in volume; a class, too, which under tentative lines of treatment may sometimes quite shrink out of sight.

It has been said that dropsical tissue is histologically myxomatous tissue, and we know that if we can remove the causes which lead to that state it quickly disappears. Now, sometimes in uterine fibroids the degree of edema and mucoid central change is great, the whole mass having a pulpy, doughy feel. This is the class of cases that the accomplished practitioner often cheats the surgeon out of. Purgatives, diuretics, alteratives, surface and central stimulation, with or without electricity, all make a remarkable impression on the neoplasmata; but as they entail the expenditure of much time many prefer the quick and decisive effects of enucleation.

In those cases of old tumors the seat of extensive interstitial mucoid degeneration, if we hang the removed mass where its fluid elements will quickly evaporate or dry out it will be noted that when these have vanished there is almost nothing left.

If we bisect the dried residue it will be observed that there is a state remaining much like a honeycomb—holes, hollows and cavernous spaces, now desiccated, mark the site of the semi-fluid masses, which give weight and volume to the tumor that they had undermined. Sometimes we will observe a similar state in large sarcomata of the ovary.

One armed with a knowledge of this mode of nature to disperse various neoplasmata should endeavor to solve the therapeutic problem by carrying it a step further, i. e., complete the innocuous destruction of the growth and leave its ulterior disintegration and dispersion to the zymotic agents and the absorbents.

In dealing with these tumors the art of surgery can go no further, but the path seems clear for the investigator to carry the lamp of science onward, and flash the way for a therapy which will relegate to oblivion all mutilating procedures and spare the unhappy victim the apprehension and terrors of a grave surgical operation.

Society Reports.

NEW YORK ACADEMY OF MEDICINE.

Section in Orthopaedic Surgery—Meeting of October 15, 1897.

CONGENITAL ABSENCE OF THE RADIUS.

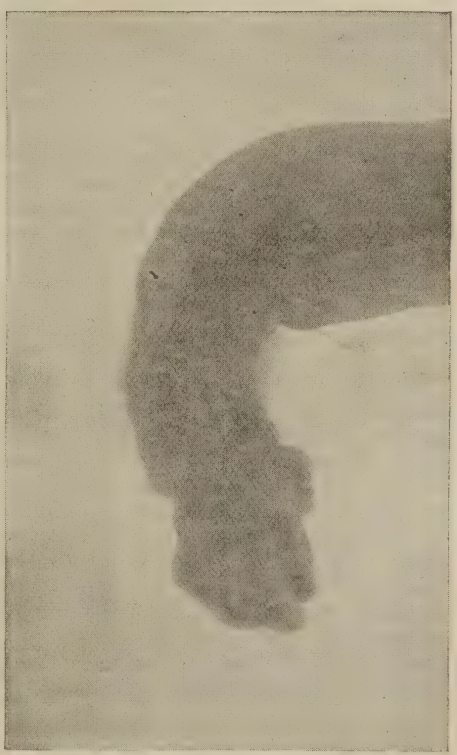
Abstract of a Paper Read by Dr. H. L. Taylor.

The absence of imperfect development of the radius in the newborn causes the appearance of club hand from dislocation of the carpus to the radial side. Case 1. Girl, 5 weeks old; absence of the radii; hand at right angles with forearm; genu-varum; mechanical treatment. The figure shows the absence of the radius and the ulna shortened, thickened and bent, also the improved position of the right hand at 15 months.

Case 2. Girl, 2 weeks old. Absence of the right radius and both thumbs with their metacarpal bones. The deformity of the right hand was extreme. The patient lived but a few months.

Case 3. Boy, 5 weeks old. Slight double radial club hand, with the radii abnormally small. The hands were kept in good position by leather splints.

Case 4. Girl, 2 1-2 years old. Absent ulna and the fourth and fifth digits with their metacarpal bones. Radius thickened and bent toward the ulnar side. The hand usually turns toward the ulnar side, but is sometimes held straight. The elbow has abnormal lateral mobility and hyper-extension, as might be expected from absence of the ulna. Children with deficiencies of this kind are usually premature or still-born. If alive they seldom live many weeks. There are about 200 recorded cases of absent fibula and 100 of absent radius; but the deficiency shown in Case 4, absence of the ulna, is believed to be very rare. The dimples, furrows and scar-like marks, ves-



Skiagraph of the Limb in Case 1.

tiges perhaps of separated adhesions, support the theory that these defects are caused by the pressure of a contracted amnion. As rotation of the fetal limbs is said to begin about the fifth week, if the amnion exerts pressure from the fifth to the eighth week the radius and fibula may be blighted. If, on the other hand, the contraction takes place before the fifth week and before the rotation of the limbs, the ulna and tibia will suffer. Operations, if performed, should be preceded by mechanical treatment. Contracted structures may be divided. Osteotomy may be followed by over-correction, and the ulna may in various ways be attached to carpus in an improved position.

Dr. R. H. Sayre said that he had treated a patient affected with double congenital absence of the radius by manipulation, stretching and retention in plaster of paris. The hands had been brought into a fairly normal position, but the child died of cholera infantum when 10 months old. In another case the ulna was so small that it hardly seemed feasible to split it for the reception of the carpus, as has been done in a reported case. He therefore fixed the ulna in a gap made in the carpus.

Dr. A. H. Phelps said we could hardly use the term "club hand" in speaking of congenital absence of the radius.

Dr. A. B. Judson said that there seemed to be no affection of the hand corresponding to congenital club foot. So-called club hand was caused by deficiencies of the skeleton, by injuries and diseases of the bones, by cicatricial contraction or by paralytic affections. There were also cases of club foot originating in all of these ways, but what we know as congenital club foot is caused by factors which are apparently not operative in the upper extremity.

A CASE OF TRAUMATIC CLUB HAND.

Dr. Taylor exhibited a girl, 8 years old, a portion of whose radius had been resected for necrosis. The radius was, in consequence, much shorter than the ulna, and the result was that the hand was thrown toward the radial side and had the appearance of a club hand.

Dr. Phelps said that in a case of club hand thus acquired he would shorten the bone instead of cutting the tendons. Tendons when divided in their sheaths are apt to become adherent, while resection of the longer bone would in suitable cases bring the hand to a normal position.

TRAUMATIC CLUB FOOT.

Dr. Judson was reminded of a patient whose tibia had been shortened for disease of the bone. As the boy grew the fibula projected to such a degree that the patient could not walk. In such cases another operation was necessary to shorten the unaffected bone.

Dr. R. Whitman was reminded of a man whose tibia had been shortened by an operation when he was 13 years old. The result was that when recently seen the leg was five inches short and the foot had been forced into extreme varus by the relative overgrowth of the fibula. Bone reproduced to fill an interval left after resection did not grow. Final results after such operations performed in childhood were usually unsatisfactory.

Dr. R. H. Sayre cited a case which showed that reproduced bone did not cease to grow. The patient had been exhibited to this section by Dr. L. A. Sayre. Four inches of the neck and head of the femur had been removed, and when the bay was 12 years old there was only about one-quarter inch of shortening. In some of Dr. J. R. Wood's resections of the jaw the lower maxilla had been reproduced and had grown with the rest of the body.

Dr. Whitman said he referred to parallel bones of the extremities. Deformity was almost inevitable when a portion of one bone only is removed.

Dr. Phelps said that new bone had feeble circulation, grew less rapidly than normal bone and became very hard, as was shown when one of two parallel long bones was reproduced.

Dr. R. H. Sayre said that the vicinity of a nutrient artery would probably influence the growth of new bone.

A CASE OF HELPLESS CLUB FOOT FROM DEFICIENCY OF THE SKELETON.

Dr. R. H. Sayre described a case in which double club foot was associated with congenital deficiency of both of the bones of the leg, in a girl 12 years old. There was a bent and rudimentary fibula and a tibia, only an inch or so long, which stuck out like a little sprout under the skin. The foot was very much twisted and hung with a helpless flail-joint against the leg. Amputation at the knee was done.

CLUB FOOT CAUSED BY ABSENCE OF THE FIBULA.

Dr. Whitman exhibited a child 8 months old, in whom congenital absence of the fibula had caused talipes equino-valgus and anterior bowing of the tibia. The equinus had been extreme, but division of the tendo Achillis and the application of a brace had brought the foot to a right angle.

Dr. Taylor had seen eight or ten patients affected with congenital absence of the fibula. He said that in such a case it was very difficult to remove the lateral deformity by an operation. As there was no malleolus to support the foot it would return to its former position. Another interesting point was that the shortening found in infancy, in congenital absence of the fibula, would greatly increase with the growth of the child. In an adult, whose measurements he had taken for some years, there is a shortening of five or six inches. In a boy of 12 years the shortening was the same, and increasing. This progressive shortening took place in the forearm, as it did in the leg.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-six issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 718 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will be paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are **not** furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

THE DEPARTMENT OF ELECTRO-THERAPEUTICS.

For four years we have presented our readers, through the untiring efforts of Dr. S. H. Monell, of Brooklyn, a department of electro-therapeutics. It has been conducted on educational principles, with the knowledge that the subject is new to most practicing physicians. We have endeavored to help the physician in this branch and have undoubtedly benefited the manufacturers of electrical appliances. We have given on an average of three pages an issue to this subject, or nearly 350 pages in the time we have continued the department. We have obtained very little encouragement from the profession by way of original material for these columns, and almost no aid from the manufacturer. This year has given us the most we have had from the latter, and consists of about a page and a half of regular advertising, mostly of a trade nature.

We have been the only medical journal to regularly endeavor to be of mutual assistance to the physician and the manufacturer, and we regret that the endeavor has met with such insufficient support from both. We therefore expect to drop this department of the "Times and Register" another year, the next issue containing the final article on electro-therapeutics of this year.

About two years ago we published an article entitled "A Question of Enterprise," in which we pointed out the relations of dealers to scientific electro-therapeutic development in this country. Not one-fourth the number of physicians use electricity who should be giving their patients the benefit of its valuable properties, but we cannot blame them for not purchasing apparatus the merits of which are so indifferently drawn to their attention.

We do consider the manufacturers are careless of their own interests in not coming to the support of such journals as directly put money in their pockets by instilling into the profession a desire to utilize their goods, and we say without hesita-

tion that electro-therapeutic manufacturers as a class are penny wise and pound foolish in respect to advertising in the journals just indicated. We candidly admit of being disappointed in this branch of work, whereas we have had abundance of assistance in other departments.

WHEN TO LAY ASIDE THE HARNESS.

We are led to the above query by a brief, philosophic and impressive editorial lately published in one of our exchanges.

The language, logic and lofty style are quite unrivaled, but we believe it would have carried more force if it applied to all branches of the healing art, as well as to general surgery.

We have long been impressed with a conviction that practitioners, especially those holding important positions in their profession, should be forced into retirement at the age of 60, or 65 at the latest.

This is the general custom in all public hospitals abroad. It should be equally so in America. If a man does not retire from his practice at 60 or thereabouts, his practice is quite certain to retire from him.

The world knows it, if he does not appreciate it, that his powers are on the decline, that the hearing becomes dulled and the vision dimmed. His ambition may not have sensibly waned, but ataxia has seized on the muscles, the gait is becoming unsteady; and with this, to the close observer, there is unmistakable evidence of participation of higher faculties. The man has become a back-number and should set himself aside to make way for the succeeding generation, following close in his footsteps.

Those there are to whom success only comes late in life. With these, whose early career was over the rough, thorny path of progress, at last secure in their position, little less, indeed, than death can separate them from the practice of their craft.

Perhaps, after all, it is a most salutary provision of nature that few pass the 50-year limit; that at or before this stage the process of reversion begins and standing room is possible for the close following column.

We commend to our readers a careful perusal of the able and thoughtful lines from the talented editor of our exchange:

WHEN TO LAY DOWN THE KNIFE.

When a surgeon has reached the apogee of his fame, when to matchless skill he unites an experience and wisdom that compel admiration and respect, and when he has obtained the just meed of reward due him for the arduous work by which he has obtained his high position, he is fortunate indeed if he can count upon many years of continued success. There is a time when the mountaineer who has reached a high peak must think of his return to other levels. It is a strange thing that so many who have reached lofty places believe that they can continue to occupy them securely until the hour comes for the long farewell. One would think that the chief desire of the hard worker would be for the dawning of a day whereupon he might dismiss his cares and rest from toil, and we all, undoubtedly, at some time look forward to something of the kind, but the force of inertia pushes us along. We heed not the fact that arteries are hardening, that sleep is less refreshing, and the days when surcease from toil might have proved a blessing hasten past, until it is realized that abdication should have taken place long since, and that there is no more prospect of leisure with dignity upon the

hither side of Lethe. It is a tendency of people of our nationality to die in harness, and we can fancy that it must be a hardship for the once grand charger to be turned out to pasture because he is over-aged to respond again to the bugle call. But the man need not wait so long, and ought to think it wiser to retire while his mental forces are yet flexible enough to accommodate themselves to other conditions. What shall it profit a man to continue until his name alone is left, for the world has always been more interested in the living, alert organism than in the one that is passing away.

Work is the destiny of man, it is the chief end of his existence, and its successful accomplishment should give him the greatest content and happiness of which he is capable. Yet, he may not with safety so wed himself to his work that it becomes the paramount condition of his well-being. If he need no longer work to obtain reputation, if the rewards he has gained have placed him and his beyond danger of want, man has fulfilled his task and become entitled to repose. When a worker of ripe years says that he would be lost without his work he exposes one of the symptoms that go to show that his labors have been too long already. No longer in these days do we discuss in council "de omne scibili." There is always more work to be done, new studies to be taken up, and he who, in the path of life, has sunken for himself a single groove whence he can no longer issue, has prisoned his mind and narrowed the possibilities of his life well-nigh to the vanishing point. A bright mind cannot lack for interesting occupation, and no one has a right to allow himself to become fossilized before the earth gets a chance at him.

—Editorial in the International Journal of Surgery, Oct, '97.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

VAGINAL BIPOLAR FARADIZATION.

In instructing physicians in practical electro-therapeutics I have been accustomed to point out the remarkable attributes of the vaginal bipolar electrode, and the useful service it renders.

Few are aware of its great value. References to its use are obscured amid the generalities of electro-medical writings, but it deserves a special prominence, for it is the gem of distinctly faradic electrodes, and is the means of securing unique and precious effects within the pelvis. Through its development and the improvement of high-tension induction coil apparatus faradic currents reach the high-water mark of their utility in gynecological practice. It is a comfort alike to patient and physician, for it involves no unfastening or removal of garments, no wet pad upon the skin, no "getting ready," and no demand upon special instrumental skill.

The general practitioner can, with the very simple care and knowledge which is requisite, employ it as satisfactorily as the most eminent gynecologist, and an appreciation of its services grows constantly with use.

The bipolar method must never be employed with the current from any faradic battery possessing the coarse spring vibrator found upon all ordinary apparatus. It must never be employed with the crudely constructed coils which are furnished with about all the faradic batteries, which cost from $30 down to $2.50, and the injurious effects which may be produced in inflammatory cases with an improper coil are even less important to consider than the effects of the irregular, jerky and rasping, irritating interruptions caused by the coarse vibrator in general use.

The electrode itself must be properly proportioned and light in weight and all others must be discarded. Both the electrode and the current must be suited to the therapeutic work in hand, and refined results cannot be expected from coarse and non-therapeutic apparatus. Compromise is absolutely impossible in this field of work. The apparatus must either be the best obtainable or it must not be used at all. There is no middle ground.

The beautiful resources of the bipolar method unfold themselves exquisitely in electro-physiological studies. Every variation in the current, the coil, and the rate and character of interruption lends variety to their manifold effects. Just as in hydro-therapy the applications of water in different doses of temperature, rate and volume produce different or opposite effects, so in electro-therapeutics the variability of dosage gives us control of a wide range of effects upon the circulatory, nervous and muscular tissues of the pelvic cavity.

Among the clinical effects within the compass of vaginal bipolar faradization are the sedation of irritable or painful states; the relief of congestion and inflammation; increase of metabolism and nutrition; absorptive tissue changes with marked tonic effects upon the capillary and lymphatic circulation, and a general muscle, nerve and circulatory stim-

ulation throughout all the organs influenced by the current. Pain of many varieties may be relieved, recent exudates may be absorbed, relaxed supports of the uterus may be toned up, congested ovaries and vessels may be relieved of their engorgment, deficient vaginal secretion may be restored, tenderness and spasm removed, and the symptomatic burdens of functional and mechanical derangements and non-suppurative pathological lesions may often be lightened wonderfully by this method alone, and especially when reinforced by galvanic current actions.

As an auxiliary to other measures it is also often invaluable when lesions are beyond its direct reach. Some of the phases of galvanic current action, which are indefinitely called catalytic, are present in these coil currents, and aid in the happy results produced.

The gradations of these results are given extreme range by adroit technique. The most directly opposite effects may be called in their narrowest sense sedation and stimulation, but along with these go delicate shadings of method which give the physician control, either partial or complete, over many of the states which bring suffering women to his office.

Place the patient upon the operating table in the usual dorsal position, with feet drawn up and knees apart, as for an ordinary digital examination. No speculum is employed, and no antiseptic irrigation of the vagina is necessary. Warm the bipolar electrode to about blood heat (generally by holding it enclosed in the palm of the hand while connecting the battery), lubricate the tip with plain vaseline, attach the positive cord to the tip end and the negative cord to the inner half. Each maker indicates by some special mark the separate sides to which to attach the positive and negative cords. Always have the rectum emptied first.

Insert the electrode gently behind the uterus and well up in the cul-de-sac as far as it will go without forcible pressure. Support it steadily during the seance, so no muscular contraction or movement of patient will cause it to slip out, but be careful to avoid pressing the thigh muscles. The tissues within the cavity are insensitive to induction currents, but the tissues of the vulva are as sensitive to the same currents as is the eye to a cinder. Have the electrode well inserted before any current is started, stop the current before the electrode is withdrawn, and never let an electrode bring a faradic current in contact with the tissues of the vulva. One experience with the agony caused by such an accident would lose the confidence of the patient forever.

Switch four or five cells, the rapid vibrator and the 1500-yard No. 36 coil in the circuit, with the current at zero. Gently increase the dose by means of the rheostat until the patient feels the current perceptibly. Again evenly and gradually increase it to the point of producing a firm and comforting grasp upon the tissues. It is important to reach the maximum of current strength required for the effect, and neither go beyond it nor fall short. With a little experience the regulation to the point of exactness is very simple, but the beginner can only be instructed by practice.

If in attempting to reach full tolerance a little pain is caused reduce the current instantly until pain ceases. Direct the positive tip of the electrode next against each painful point that can be detected by carefully shifting it from one ovarian region to the other. Regulate the dose to full comfortable tolerance and hold the tip steadily upon the point of tenderness until it is relieved. (This will require perhaps five minutes or less. If more than one such point is found the treatment is the same for all).

As sedation increases with each moment of the action of the current the original maximum dose will soon be felt less strongly, or may cease to be felt at all in five or ten minutes. Gently increase the dose again until it reaches the maximum of the newly acquired tolerance. When the current again begins to be less perceptible close the sitting by a very slow and gradual reduction to zero through the rheostat. Sedative re-

sults require that the tissues be left at rest, and the withdrawal of the current must be without haste and devoid of any disturbing quality. When, after not less than three minutes spent in this final process of diminishing the current to zero, the seance is complete, remove the electrode. A tampon may be inserted in suitable cases.

When the 1500-yard No. 36 coil has accomplished its work in a sensitive case and no longer provides sufficient current, or, if it is not at first adapted to cases of only moderate sensitiveness, the proper dose must be obtained by means of other coils, passing first to shorter coils of the No. 36 wire, and if these are still inadequate, proceeding to the 800-yard No. 32 coil, which will usually be the maximum until improvement is well advanced. In any case and during any stage of treatment the regulation of the dose by means of one coil or another is a perfectly simple matter and wholly devoid of perplexity after a single moment's instruction in the technique.

THE ROENTGEN RAYS IN SPRAINS OF THE FOOT.

M. Destot asserts that there is no class of lesions in which the radiograph is more valuable than in traumatisms of the ankle and foot. Here the osseous parts are so lodged that lesions of them may entirely escape us. In fact there is no clinical sign to base diagnosis or establish prognosis without it.

Seventeen cases recently came under his care, in which fracture of the astragalus as a complicating factor in sprains was present that entirely escaped detection until the rays were utilized. He had seen two subastragalian with one Lisfranc dislocation; carpal and metacarpal fractures quite impossible of recognition, without the same means.

The medico-legal importance of these formerly unknown facts is of the greatest magnitude.

M. Destot cites the case of a miner in St. Etienne, who for a long time had an action against the company for an injury to his ankle and foot. Experts could find nothing and a judgment against him was ordered, but he applied to the Court of Appeals in Lyons, which repeatedly and definitely showed by the aid of the rays a fracture running completely through the neck of the astargalus.

Besides fracture of the astragalus this new light will expose those through the os-calcis, and other important, isolated metacarpian fractures, as yet impossible of detection by other methods of examination. It is equally valuable in tarsal luxations, those of the thumb or other members of the hand.

The author concludes by declaring that the importance of the radiograph may be defined in a word—it is a method of urgency and necessity and one should not hesitate to have recourse to this illuminating agent in the presence of all severe sprains, doubtful dislocations or fractures.

—Lyons Medical, 22 Aug., '97.

FOREIGN EXCHANGES

SUPRA-PUBIC PUNCTURE IN RETENTION OF URINE.

(TRANSLATED BY LOUIS LEWIS.)

There are few practitioners who have not been at some time called on to relieve retention of urine. I am not here alluding to those cases that might not inaptly be termed medical, wherein the urethral passage is generally free. Treatment under these conditions is simple enough, and depends, of course, on the cause. Neither do I have reference to retention due to inflammation, congestion or spasm, such as frequently complicates gonorrhoea. But I except acute prostatitis, which also accompanies gonorrhoea, and calls for more or less surgical aid.

I exclusively refer, in this short study, to acute retention of urine where catheterization is impossible, and there is urgent need to operate, either by tapping or aspiration above the pubes, the causes that call for this being either hypertrophied prostate, impassable stricture or wound of the urethra.

Until recently it has been the custom in these urgent cases to puncture the bladder above the pubes and let out the contents through a canula. But this method has been vigorously condemned by M. Poncet, of Lyons, who affirms that it is far from being as harmless as has been supposed, and that there are indications and contra-indications that must govern its employment.

Tapping through the rectum or incision through the perineum are not here considered, as they are universally tabooed, at least throughout France. Thus we have no choice but the supra-pubic route, where there is no obstacle in reaching the bladder except the peritoneum.

In the normal condition the parietal fold of the peritoneum is reflected from the abdominal wall onto the summit of the empty bladder, without coming into contact with its anterior surface. But as the bladder becomes more and more distended it gradually ascends, until it becomes a prominent swelling, reaching sometimes even to the umbilicus. During this ascent, carrying the peritoneum with it, the bladder gradually increases the distance between the culde-sac where the peritoneum is reflected and the edge of the symphysis, making the bladder more easy of access through this route when full than when it is empty. This, of course, is well known. In the space then, bared of peritoneum, the bladder is readily punctured.

Now, say that we have decided on tapping. Assure the sufferer that the little operation will afford immediate relief, and place him on the right side of the bed, with his shoulders slightly raised, and his thighs open and a little flexed, and see that the region to be operated on is perfectly aseptic. On either side of the proposed puncture leave a tuft of hair when you shave him; this may come in useful to tie in a bougie or sound in case you find a chance to overcome the urethral obstacle. Sterilize a very small needle, attached to a good aspirator, use your right index finger as a guide to determine the thickness of the abdominal parietes; and with the left forefinger seek the superior border of the symphysis pubis; just below this plunge the needle in, gently, from above downwards. There will be no resistance after penetrating the skin. Now connect the bladder with the apparatus wherein the air has been

rarefied,and the urine will come; take notice of its tempidity. Meanwhile keep the needle "in situ," while you follow, by pressure of the left hand, the diminution of the bladder; and after a while you will find the needle gradually lowering itself toward the abdominal wall, as the vesical muscle retracts behind the symphysis pubis. Now, you can let the air enter the receiver, withdraw the needle and close the aperture with iodoformed collodion. If you think it desirable to "lavage" the bladder leave the needle still "in situ," and it will be easy to wash the organ out with a boric acid or other solution. This operation should always be performed with an aspirator, and with a fine capillary needle.

It would seem that such a simple operation would entail no complications. Nor does it ever, under favorable conditions; but there is the possibility of urinary infiltration, abscess, edema, collutitis, peritonitis and hematoma.

Infiltration of urine need scarcely be noted, as it would solely be due to the use of an overlarge trocar. Under distension the walls of the bladder are less capable of resistance and contraction. Thus, after puncture, as the urine re-accumulates, it is easy to understand that this renewed distension provokes some permeability of the punctured opening.

Abscess or suppuration of the cellular tissue over the bladder is not uncommon. It is easily accounted for by the escape of a drop or two of urine, more or less septic, into the cellular tissue, during withdrawal of the needle. To avoid this never withdraw the needle until air has entered the receiver. Peritonitis seems almost an impossible contingency, seeing that the peritoneum is in no way involved in the operation. In point of fact it is a very rare complication, and can only be due to extreme bungling in the determination of the point of puncture, or to some unusual idiosyncrasy of the peritoneal cul-de-sac through adherence to the symphysis pubis; this condition has sometimes followed a case of pericystitis.

As to hematoma, only one case has been reported; but one can easily understand that an enlarged congested vein may be accidentally punctured in a case of distended bladder, and a hematoma of the cavity of Retzin's might ensue.

I will only allude to the possibility of wound of the posterior wall of the bladder with the trocar, since this could only happen through plunging the instrument to a ridiculous depth.

Lastly, the one accident that could be imputed to puncture above the pubes is the possibility of infection of the fore vesical cellular tissue. But when the urine is aseptic this could not occur, and even when it is septic it never occurs if the aspirator and a small needle have been used.

Those who commenced the study of medicine before the days of antisepticism will remember their experiences in tapping the bladder as an urgent expedient. As Dr. Tedenat remarks, the trocar used to be extracted from its little velvet case, often greasy and dirty, probably after lying all night by the bedside on a table, in contact with the patient's food and spittoon. Then it was washed and oiled in a careless sort of way, perhaps with rancid oil. That was the method of employing the trocar in those days. And yet the operation was usually successful. Do we not find victims of prostatic trouble carrying their catheters in their hats, or in some dirty old journal?

Puncture of the bladder has its indications and contra-indications. It should only be resorted to when there is acute retention, and the bladder is entirely inaccessible for urethrane. As already stated these conditions occur in hypertrophied prostate, impassable stricture and urethral wounds.

It would seem, considering the frequency of these conditions, that the operation would be often needed; but, in point of fact, it is not so. Catheterism is very rarely impossible, except in traumatic cases.

Tapping in the supra-pubic region, in cases of urgent retention, is only a palliative measure, which gives time for the urethra to recover its

permeability, or for preparations for a more definite operation. Thus it certainly has its uses, and is only contra-indicated when the prostate is enlarged and infected, and there are false passages. Then cystotomy is called for. In all other cases aspiration with a small needle is safe and effectual.—Dr. V. Carlier, "Echo Medical du Nord."

Current Medical Literature.

CASES TREATED AT THE SOUND VIEW HOSPITAL WITH THE AID OF BOVININE.

ANEMIA CASE NO XXI: BY DR. R——, NEW YORK.

Annie Case, American, age 33, first seen August 10, 1897. All symptoms of a well-defined case of anemia, such as waxy skin, pale lips and conjunctiva, loss of interest and energy, impaired digestion and appetite, insomnia, etc. The blood, on microscopic examination, showed a marked deficiency of red corpuscles and hemaglobin. The case was of several years' standing, and had resisted many treatments. Patient said that her weight had been originally 140 pounds; it was now only 110. My first attention was directed to her secretions, and my next to her nourishment. I ordered plenty of good fresh air, light diversion and judicious exercise. A teaspoonful of compound chamomile mixture was directed to be taken in a wineglass of hot water half an hour before meals. Also a tablespoonful of bovinine in a wineglassful of old port wine every three hours. After two weeks the compound chamomile mixture was discontinued, and the bovinine was increased to a wineglassful in milk every three hours; patient having already greatly improved, feeling stronger, sleeping well and appetite much better. The blood also on microscopic examination showed decided increase of red corpuscles and hemaglobin. On September 8 the patient had increased in weight by 10 pounds, and her blood was of almost normal standard. Observation will be continued and reported.

APPLIED BLOOD IN CATARRHAL DISEASES. CASES XI AND XII: BY DR. J——, NEW YORK.

Case XI. George Carter, American, age 32; first seen August 21, 1897. Naso-pharyngeal catarrh, of many years' standing and many ineffectual treatments of the ordinary kinds. Examination of the passages revealed large masses of hypertrophied tissue, and in the throat five distinct ulcers. On account of the size of hypertrophied tissue in the passages—so large as almost to occlude them—I determined to remove portions of it, which was immediately done. The ulcers in the throat were then touched up with 25 per cent. pyrozone, and the passages and throat were thoroughly cleansed with Thiersch solution. A spray of bovinine was ordered used every two hours, or oftener if dryness or pain should require, and the patient was to return every morning for a regular washing out as at first. In one week all the ulcers in the throat were entirely healed, and the cut surfaces in the passages were half covered with healthy skin. Bovinine was now ordered for morning, noon and night only, and the patient himself was directed to douche the passages out with the Thiersch solution before every application of the bovinine. August 7 the patient was discharged cured.

Remark: the most extraordinary feature in the history of this case was the rapid healing of the ulcers in one week; a result never before observed by me.

CATARRHAL CASE XII: BY DR. J——, NEW YORK.

John Hayles, American, age 27; first seen August 14, 1897. Otitis, re-

sulting from a catarrhal condition contracted after taking a severe cold. Had been treated by many physicians at various institutions, with very little benefit. Examination revealed considerable ulceration in the middle ear, with two little cul-de-sacs, all the surfaces exuding pus. The drum was also perforated. I began treatment at once in the following manner. The ear was first thoroughly washed out with warm Thiersch solution, and the ulcerated surfaces were touched up with a 50 per cent. solution of nitrate of silver. The ear was then again washed out with Thiersch, and carefully dried; then iodoform-bovinine was dropped in, and the patient was directed to renew this application every two hours, and return again every morning to have the ear thoroughly cleansed. In one week the condition was so much improved that pain, which had been a prominent factor in the complaint, was entirely relieved. The discharge had been also considerably mitigated as to quantity and quality, being now almost clear serum. Patient was instructed to continue the application every three hours, and return every morning as before for washing out. September 2 the ulcerated surfaces were covered with healthy skin, except a point of the size of a pin head. September 7 the surfaces were entirely covered, and the condition cured. Later a rubber disk drum will be inserted, in hope to restore hearing.

These cases, as usual, will be watched hereafter, to ascertain how far a radical cure has been effected, or how far the usual sequel of recurrence has still to be looked for in such cases, and this interesting issue will be duly reported for the information of the profession.

CATARRHAL CASE NO. XIII: BY DR. R——, NEW YORK.

Michael Navarro, Spanish, age 27; first seen August 12, 1897. Nasopharyngeal catarrh of many years' standing, treated at various institutions without result. Examination of the passages revealed considerable ulceration of the septum and mucus membrane, the surfaces exuding large quantities of mucus; so much so that every morning on getting up he would be subjected to a severe attack of vomiting, followed usually by hemorrhage from rupture of the capillaries. Sense of smell practically obliterated. At the suggestion of a professional friend I determined at once to apply the blood treatment. After I had thoroughly washed out the passages with a solution of Listerine I touched up the points of ulceration with 25 per cent. pyrozone; then with an albolene atomizer sprayed bovinine and salt water into the passages. I instructed the patient to wash the passages out thoroughly every morning by douching them with Thiersch solution, to use the bovinine-salt-water spray every two hours, and return in a week for examination. Promptly at the time appointed the patient came to see me, and expressed himself as feeling much improved. Examination of the passages showed that many small points of ulceration had healed, and others were rapidly becoming covered. He was directed to continue the same treatment as before, and to return again in a week. Repeating this course until September 10 examination then showed complete healing of all the ulcers, and lessened formation of mucus. The sense of smell, which had been almost wholly destroyed, was now nearly normal. Further issue will be observed and reported.

ULCERATION OF THE CERVIX; ULCER CASE CX. BY DR. S—, NEW YORK.

Lillie Bentz, American, age 30; first seen August 9, 1897. Ulceration of cervix, about the size of a five-cent nickel, taking in almost the entire lip of the cervix on the right side, and extending up on the external surface. This little ulcer had been of three years' standing, and had resisted many vigorous treatments. I concluded, after thorough examination, that this case, like those of leg ulcers, was a case of local starvation keeping this condition up, and that effective topical nutrition was needed. The vagina was thoroughly washed out with Thiersch solution, the surface of the ulcer was

touched up with 25 per cent. pyrozone, a tampon of iodoform-bovinine was adjusted, and the patient put to bed. After six hours the vagina was again washed out with Thiersch, and a fresh iodoform-bovinine tampon was adjusted. This procedure was repeated every six hours for one week, when the ulcer was found to be reduced one-fourth in size, and the rest of the ulcerated surface was covered with healthy granulations. Thenceforward the iodoform-bovinine was applied only twice a day. August 22 case was discharged cured.

TRAUMATIC NECROSIS OF BONE.

Amos Harding, American, aged 28; first seen August 15, 1897. Necrosis of left mastoid process, result of traumatism. The necrosed tissue was thoroughly scraped out, and edges of wound touched up with a 40 per cent. solution of nitrate of silver. The wound was then thoroughly flushed out with Thiersch solution; after which the cavity and edges of the wound were dried and touched up in their entirety with 25 per cent. pyrozone. Cavity was then packed with sterilized gauze saturated with iodoform-bovinine. This dressing was changed twice in 24 hours for one week. Then appearing a thoroughly healthy granulating condition, pure bovinine was applied in the same way once in 24 hours, until September 17, when the patient was discharged cured; the cavity being filled up with healthy bone, and the edges of the wound united, leaving a smooth pink scar.

HYPNOTICS.

We recently quoted a brief summary on hypnotics from the 1897 "Year-book of Treatment," calling attention to the usefulness of the agents introduced during recent years, attesting the safety and superiority of chloral and Chloralamid, admitting the value of sulfonal and trional—if used with care to prevent dangerous symptoms, and referring to pellotine—the only new introduction of last year.

Nearly five years ago we compiled a list of "New Hypnotics," quoting trade and chemical names, and synonyms, and giving brief therapeutic estimates of each. The article was widely copied at that time. It included all the hypnotics known now, excepting only trional and pellotine. A similar list, emanating from some German publication, is going the rounds of the pharmaceutical and medical press now. It is a demonstration of the fact—only two new hypnotics having been introduced during the past five years—that the fear expressed occasionally in some quarters, that the "avalanche of new remedies is overwhelming us," is unfounded.

An American author, whose specialty is therapeutics, and who is just now engaged in a study of hypnotics, gave us his estimate of this class of agents in a conversation recently; we quote his views in our own words:

"The only new hypnotic introduced during the last ten years is pellotine; its value is not yet established, although several favorable clinical reports have been published; nothing valuable therapeutically has been heretofore gained from the cactus plant. Trional, introduced recently, is only an improved sulfonal (dating back more than 10 years), and the two are equally dangerous. Chloralamid is the next recent introduction, and is the safest of all; but even chloralamid can induce a habit, although few cases are on record; it is least poisonous, and patients have recovered without damage from enormous overdoses.

"All the new hypnotics can be used successfully in some cases, properly administered. Chloral and chloralamid appear to yield the best and most reliable results, while least exposing the patient to dangerous symptoms. The ideal hypnotic is still to be attained."—American Therapist.

For family or medicinal use there is none better than the Jesse Moore whisky, either Bourbon or Rye. In cases or bulk. Jesse Moore, Hunt Co., Louisville, Ky., or L. Heineman, agent, Jamestown, N. Y.

IRREGULAR MENSTRUATION IN YOUNG WOMEN DUE TO ANEMIC CONDITIONS.

BY H. EDWIN LEWIS, M. D., BURLINGTON, VT., RESIDENT PHYSICIAN FANNY ALLEN HOSPITAL.

The young physician just starting into practice cannot help but be impressed with the frequent occurrence of menstrual disorders in young girls during the period just succeeding the age of puberty. The metamorphosis of a girl into a woman, consisting as it does of structural and functional changes throughout her body, in many instances leaves behind pronounced alterations in the quality or even quantity of the blood current. How common it is to have a mother bring her daughter to the physician and say, "Doctor, I would like to have you do something for my daughter. For nearly a year she has been losing interest in everything and seems to be completely worn out. She has no appetite and absolutely no ambition for work, study or play. She does not lose flesh or grow thin at all, but her color is so poor and she seems so weak that I fear she is going into consumption."

Inquiry on the part of the doctor elicits the further information that the young lady in question is 16 years old or thereabouts, and that she is a school girl. A year or two ago she first menstruated and since that time has been unwell only twice, or at irregular intervals varying anywhere from three to nine months. Her bowels are either constipated, or the reverse, and she may complain of headache, vertigo, palpitation of the heart, insomnia, indigestion, etc., etc. The pale face with its sallow greenish tinge, the bleached tongue, the colorless conjunctivae and finger nails, tell well the tale of impoverished blood. Combine the history with the objective symptoms and the diagnosis is clear of chlorosis or green-sickness. The absence of cough or pulmonary symptoms excludes the dreaded "consumption," but we have instead a condition of the blood in which the essential constituents are diminished and the whole quality of the life-giving current so depreciated that the various organs of the body are unable to perform their normal functions. The uterus is small and illy developed and the supply of rich blood it so urgently requires in its developmental state is not to be had. Is it any wonder, then, that the chlorotic girl does not menstruate regularly? It is a great wonder that she ever menstruates at all. Correct the anemic or impoverished condition of her blood and the physiological function of her uterus will be resumed as naturally as that of any other organ.

How this chlorotic condition can best be corrected is the next question and one which because of its frequency concerns every practicing physician. Countless remedies have been presented to the profession, but far and foremost above them all is iron, notwithstanding certain high authority to the contrary. Arsenic is certainly valuable, but it ranks far below iron or even manganese in the therapeutics of anemia. In order to be most efficacious, however, the iron should be in its most readily assimilable form, and until recently the carbonate and albuminate have been supposed to present this requisite in the highest degree. But since manganese has grown in favor as an adjuvant to iron a new preparation has been submitted to the medical profession and in every way it has proven itself an ideal one. I refer to Dr. Gude's preparation of the peptone of iron and manganese, known as pepto-mangan. This admirable combination of iron and manganese is readily taken into the human economy and appropriated to its needs, without deranging the weakest alimentary tract, or hindering in any way the normal processes of digestion, assimilation and excretion. It should be given in water or milk in teaspoonful doses after meals, and its administration is invariably followed by the results desired.

But in order that the medical treatment of chlorosis may be most valuable and efficient, it should be augmented by auxiliary treatment consisting of careful attention to diet and exercise. It goes without saying that the food of an anemic girl

should be most nutritious and particularly abundant in albumen, while the exercise should aim to provide greater quantities of oxygen in the form of pure air, without lowering the vitality. Walking, skating, tennis, or bicycling in moderation are all able to supply the demand for exercise.

Treatment laid down on the above lines, followed out in every instance with good habits of hygiene and a careful observance of nature's demands, will regulate the various functions of the body, and the menstrual function will prove no exception to the rule.

The following cases will substantiate the above:

Case I. Miss C. S. K.—Seventeen years old. Decidedly anemic and much troubled with constipation. First menstruated at 14, since which time she has never been regular, flowing profusely sometimes twice a month, and other times going three or four months without menstruating at all. Has frequent fainting spells and a decided anemic heart murmur. At time of coming under observation had not menstruated for two months and ten days.

Treatment consisted of a regulated diet, tablets of aloin, strychnine, belladonna and cascara sagrada, one each evening until bowels were regular, and teaspoonful doses of pepto-mangan (Gude) after meals. Gradually the fainting spells and heart symptoms disappeared and on the 15th day after commencing treatment she began to menstruate, the flow being natural in quantity and continuing four days. Treatment was continued, and 29 days later she menstruated again, continuing this time five days. Soon after this the pepto-mangan was stopped. From now on up to the present time, a period covering three months, her menses have appeared regularly every 28 days.

Her whole appearance is changed and in every respect she appears well and strong. Period of administration of pepto-mangan 55 days.

Case II. Miss K. M.—Aged 20. Menstruated first at age of 15, and was fairly regular for three years, but since an attack of typhoid fever two years ago has never known when she was going to be unwell. Patient was not thin, but face was pale and yellowish, hands and feet were cold "all the time," and her whole condition was one of "blood poverty." Complained of frequent attacks of diarrhoea following constipation.

Treatment consisted of plenty of out-door exercise, good food with abundance of milk, and pepto-mangan (Gude) in teaspoonful doses after meals.

Her restoration to health has been rapid and satisfactory. She has menstruated three times since beginning treatment, the longest interval being 31 days. Says she is all right and her appearance certainly sustains her words.

In this case the administration of pepto-mangan covered a period of 36 days.

Case III. Miss D. L.—School girl. Aged 14 years. For two years she had been troubled with headaches, dizziness and short breath, fainting away at the slightest provocation. Had no appetite and as her mother expressed it, "for the last six months had been going down hill pretty fast." Had been treated by a physician for heart disease, but received no benefit. Menstruated first seven and a half months ago, "but had not seen aything since."

Examination showed heart to be normal, although it was a trifle fast, and a slight murmur could be determined when patient was in a recumbent position, evidently anemic in origin. Lungs proved to be all right. Her general condition was enemic, and she was put on pepto-mangan (Gude) a teaspoonful after meals, and sent into the country, where she could be out doors most of the time and have plenty of eggs and milk. A letter from her mother says that she has changed so that she can hardly believe it is the same girl. Furthermore, her menses appeared 21 days after starting the pepto-mangan and returned again 29 days after. The pepto-mangan was ordered stopped, and since then I have not heard direct from the patient, although from her father I

learn that she is "perfectly well" and coming home soon.

Period of administration of peptomangan 56 days.

Case IV. Miss L.—Aged 18. Had never menstruated. Her general appearance was one of profound anemia. A careful examination eliminated any abnormality of genital apparatus. Organs normal in relation, but undersized. Prescribed peptomangan in teaspoonful doses after meals and gave general directions as to diet, etc. Began to menstruate 32 days after beginning treatment, the flow continuing one week. Twenty-nine days later she menstruated again. At the present writing she is still under treatment and is due to menstruate in 17 days. Her whole condition is very much improved.—From the Vermont Medical Monthly.

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

SURGICAL INTERVENTION IN INTESTINAL OCCLUSION.

M. Lejars in his communication specially notes those cases of intestinal occlusion dependent on paralysis. There are several other varieties.

The most simple yield to electrical lavements, e. g., female, 60, with umbilical hernia and grave symptoms, peculiar to strangulation. The hernia was not sensitive, although the abdomen was tympanitic.

M. Lejar administered an electric injection and in about 15 minutes the patient had a free discharge of gas and feces. Another patient had an epiplocele with benign paralytic ileus. For eight days the man, who was 40 years old, had no motion. The situation was critical in the absence of a definite lesion. On abdominal section, although the intestine was greatly distended, there was no mechanic obstruction found. The cecum was then open, when a large quantity of gas and feces escaped.

Immediately after he had an enormous movement from the rectum.

This man fully recovered his usual robust health. Two months later an operation was performed for the artificial anus to close it. But on the second day peritonitis set in and he sank. On autopsy a tuberculous ulcer with perforation was found in the sigmoid.

Another patient, 37 years old, entered the hospital for treatment of intestinal occlusion. The abdomen above the umbilicus was ballooned up and fecal vomiting was continuous. Electric injection had no effect. An incision was made above the navel, when an enormously distended colon was reached. This was opened. An artificial anus gave immediate relief and free movements per anum began. It is a mistake to believe that stercoraemia is always benign, for it may kill. One man during the treatment of a fractured shoulder was seized with intestinal occlusion. Artificial anus gave temporary relief. Two days later he succumbed. But on autopsy no obstruction could be found.

This state proceeds from a paralysis or a spasm, from an insidious, morbid state of the intestine. If the electrization fail to give relief we must resort to exploratory incision to remove the obstruction and make an artificial anus.

—Journ. Des Practicens, 10 Oct., '97.

Note by Translator.—In many cases of ileus of the type described so well by the distinguished author, before we resort to a major surgical operation opium or morphine should be carried to a point approaching narcotism, in order to calm and quiet the reflexes.

Again, a simple and often efficient mode of relief may succeed full, pul-

monary anesthesia. It overcomes muscular spasm and unfolds the knotty kinks in the intestine.

It has been my experience to see it act like magic in two cases which resisted every conceivable measure for opening the lower canal, and hence I should most earnestly commend it when symptoms of strangulation are present. T. H. M.

MORTAL HEMORRHAGE AFTER THE EXTRACTION OF A TOOTH.

A young man of a hemorrhagic diathesis, with his own hand extracted the first molar on the left side. The gingival bleeding was such that he had to visit the dentist.

The hemorrhage was for the time arrested by the thermo-cautery. One hour later bleeding once more began. Hot water, turpentine, antipyrine and ergot, with compression, were employed, but in vain. Then artificial serum was injected, but without effect, and he sank on the fifth day.

—La Med. Moderne, 12 Sept., '97.

The French writer recommends that in all cases of this kind the alveolus should be filled with plaster of paris, held in position until it sets.

HOW THE COMPRESSION OF THE CAROTIDS MAY BE UTILIZED IN SURGERY TO EFFECT ANESTHESIA.

M. Jaboulay says that one may effect prompt and effective anesthesia by the compression of the carotids.

The carotids need be compressed but a few moments. We will notice that the patient straightens out, closes the eyes and becomes quiet. The visage becomes blue at first, and then pale. Consciousness is partly, but not completely lost.

It is now we may reduce a dislocated shoulder or hip or coaptate the ends of fractured bones. Our patient remains unconscious for a few moments after pressure is removed. It is now we may examine a fractured hip, make an incision, or any other rapid movement.

This is recommended when other anesthesia is not to be had, or when a brief period of anesthesia is desirable.

—Bull. Du Lyon Medical, 10 Oct., '97.

SYNOPSIS OF FIFTY-SIX CASES OF EMPYEMA OPERATED UPON DURING 1896, IN THE CHILDREN'S SERVICE OF MOUNT SINAI HOSPITAL, NEW YORK, WITH REMARKS.

The following paper was read by Dr. B. Scharlau before the American Pediatric Society, Washington, 4th May, 1897:

The proper treatment of empyema is still open to discussion, and the views differ widely; therefore I thought it timely to bring before you a comparatively large number of cases, all treated within one year in the same hospital after a uniform plan, namely, primary exsection of a rib in every case.

I have operated in 1896 upon 56 children, 28 male ones and 28 female ones; the youngest patient was 15 weeks, the oldest one was 13 years old. The empyema was found 35 times on the right, 20 times on the left, and once on both sides (this 2-year old patient recovered). As far as could be ascertained the children were sick on admission—one week, twice; two weeks, 11 times; three weeks, 13 times; four weeks, six times; five weeks, six times; seven weeks, once; two months, five times; three months, once; unknown, six times.

In 22 cases the patients did have or still had pneumonia. There is a marked difference in the results during the first and the second six months of the year. While in the last half year only two died out of 26 cases, 16 died out of 32 during the first half year, making a total of 36 recoveries and 18 deaths; two children left the hospital improved (by request of the parents).

A death-rate of 33 per cent. seems to be rather large, but the results will appear in a much better light if we look into the causes of death. Two poorly nourished children died within three days after the operation, and in these cases alone the shock from the operation might be cited as having caused death; one child

died suddenly from an unknown cause when really well; two children died from measles and one from diptheria when nearly well; two died from tuberculosis; eight died from pneumonia, probably on a tubercular basis; one died from diarrhoea; one died from exhaustion.

In summarizing, we find that from 56 cases only two died possibly in consequence of the operation, while 16 died from causes which had no connection whatsoever with the surgical procedure; therefore it may well be said that the exsection of a rib is a comparatively harmless operation.

I do not intend to-day to dwell on its merits and demerits, wishing to discuss only one point in regard to the after-treatment. About a year and a half ago, during a discussion of empyema in the New York Academy of Medicine, Dr. Henry D. Chapin mentioned that he had operated a few times by exsecting a rib, but that he had returned to his old love, a simple intercostal incision, because after rib exsection often a thoracic fistula remained, which it was found difficult to close. But such fistula will even be observed not infrequently after an intercostal incision. What is it caused by? Either the lungs have not sufficiently expanded, or the chest walls have not sufficiently sunk in, thereby allowing a cavity to persist, from which a constant flow of pus will force it way. Such a condition does not depend on whether we have operated by exsection or by incision, and cannot be laid at the door of the former method. On the contrary, an extensive secondary exsection of three, or four, or more ribs will mostly result in a complete cure.

But Dr. Chapin probably meant those cases in which the fistula is due to diseased or dead bone, and I admit that they are oftener met with after exsection than after incision. What I deny is that it is difficult to close such a fistula. All we have to do is to remove the dead or diseased tissue and let the wound fill up by granulation. That we have to do such a secondary operation not infrequently after excision is, in my opinion, caused by the too rapid regeneration of the exsected rib, while the process of suppuration is still going on, thereby preventing the formation of a normal bone. I lay before you a specimen which clearly illustrates the conditions existing under such circumstances: A few months ago I operated on a little boy 2 years old. All seemed to go well and the little patient left the hospital cured. He returned ten days ago with two small fistulae leading to diseased bone. A week ago to-day I excised almost the whole rib, from the cartilage to nearly the spine. The specimen shows that the exsected rib had been regenerated, but that the new bone had interspersed with exuberant granulations. The child is doing well and will shortly be cured completely and permanently.

In the discussion which followed Dr. William Osler, of Baltimore, said it made a great difference what the bacteriological examination revealed. It was generally recognized that in certain cases of pneumococcus empyema a less serious operation than incision, a simple tapping, might suffice. In the cases of streptococcus empyema he thought the surgeon who made a free opening did the best for the patient.

—Archives of Pediatrics, August, 1897.

EMPYEMA IN YOUNG CHILDREN.

Empyema in children has always been for many reasons a disease of the greatest interest and importance —of interest on account of the difference of opinion often arising as to treatment; of importance because there is always a great likelihood of the presence of pus in the pleural cavity being overlooked. Empyema in children should not be a particularly fatal affection, provided that an early and correct diagnosis is made, and that prompt measures are adopted for the removal of the purulent matter. According to Gerhardt most of the pleurisies occurring in children are purulent, and it has been estimated that fully two-thirds are metapneumonic. That the pus should be removed as quickly as possible is agreed upon unanimously, but in

regard to the means to be employed toward this desirable end opinions still differ. Solis Cohen says that absorption of pus from the pleural cavity is practically a myth. Although it is possible for small effusions to be absorbed, it may be laid down as an axiom that where there is pus present the only rational treatment is evacuation. Now, as to the means, the late Dr. Sturgess, of England, believed that resection of rib was necessary and that the greatly lessened rate of mortality was altogether due to improved treatment in this respect. Some even go further and insist on the necessity of washing out the cavity. Dr. Joseph Winters does not think that resection of the rib is indicated, but holds that incision and drainage are sufficient. He, however, is a believer in irrigation and contends that washing out by means of hot water at a temperature of 125 to 130 degrees cannot have a prejudicial effect. Dr. E. Coutley gave an account, at a meeting of the London Medical Society, of 86 cases treated by various methods, which gave a mortality of 16.6 per cent. The rate of mortality was about the same after resection as after incision, except that five out of six cases under 2 years old treated by resection were fatal. From a sifting of the mass of evidence on the subject it would appear that incision and drainage should be the treatment pursued with patients up to 2 years of age, and that after that period the surgeon should use his own judgment and perform resection if he deems it advisable. The death-rate from infancy to the age of 3 years is very high—nearly 50 per cent.—but after the age of 3 the prognosis is much more favorable. The use of chloroform during the operation is not contra-indicated. Dr. Winters advises that the patient should not be fully under the influence of the anesthetic, as it is desirable that he should cough and, if possible, cry, so that the explosive expiratory efforts should forcibly expel the pus from the pleural sac.

—Archives of Pediatrics, May, 1897.

OPINIONS ON SCHERING'S FORMALIN-DISINFECTION METHOD.

1. Professor C. Flugge, of Breslau, Geheimer Medizinalrath, and member of the Imperial Health Department, writes:

"I regard formalin disinfection as very valuable in various infectious diseases. As can be seen from the accompanying abstract of a communication from Dr. E. Poleck, I believe that your apparatus, after comparison with those of Trillat and of Rosenberg, is the most practically useful one. It is my intention to employ it in the near future upon a larger scale, more especially since, by order of the "Cultusminister, a School of Disinfection is to be established here."

2. Dr. Alexander, Regierungs and Medizinalrath, of Breslau, has written to inform us that the value of our formalin disinfection method is well recognized in the Breslau Hygienic Institute.

3. Dr. E. Poleck, of Breslau, assistant in the Hygienic Institute, at the conclusion of a paper read before the section on hygiene of the "Schlesische Gesellschaft fur Vaterlandische Cultur," July 28, 1897, says as follows (Allegemeine Medizinische Central Zeitung No. 66, 1897):

"Aronson's results have been tested by Dr. Laschtschenkow in the Hygienic Institute here and have been fully confirmed.

The Schering apparatus is cheap and handy, requires no attention whilst in use and the results are good and reliable; it is therefore positively to be preferred to that of Trillat."

4. Dr. Markl, K. K., Bzirksarzt in the Ministry of the Interior, Vienna, writes:

"All the experiments made with Schering's Formalin Lamp, which you have sent us, have been successful."

Miscellany.

THE EMPLOYMENT OF EUCAIN IN LARYNGOLOGY AND RHINOLOGY.

BY DR. J. FEIN.

After a detailed description of the properties of employment of Eucain for various purposes the author lays great emphasis upon the lesser toxicity of Eucain as compared with cocaine. The results hitherto published regarding the employment of Eucain in rhinological and laryngological operations, Dr. Fein thinks, may not have been sufficiently convincing, as neither Forster nor Zwillinger performed any very painful endolaryngeal operation or severe rhinoscopy under Eucain anesthesia. In his own practice he has, however, operated in 53 cases of diseased larynx and throat, some of them extremely severe.

A 10 per cent. solution of Eucain was applied in the nose by means of a cotton-wool pad, and in the throat with a hair brush. Generally three paintings sufficed to suppress reflex action and render operatic measures painless. Although the anesthetic action appeared neither so rapid nor powerful in development as with cocaine, the author considers very advantageous the absence of swelling of the mucous membranes, and, in consequence, the almost absolute suppression of post-hemorrhage.

—Wiener Klin. Wochenschrift, 1897, No. 22.

THE EMPLOYMENT OF ARGENTAMINE.

BY DR. J. S. SCHULHOF.

Argentamine has been almost exclusively employed for several years in Professor Hoor's Eye Clinic, in Klausenburg, for affections of the conjunctiva. Last year alone 240 cases of conjunctival disease were thus treated, and so far this year 88 cases, making in all 328 cases. These included cases of—

	1896.	1897.
Conjunctivitis catarrhalis	151	50
Trachoma	49	29
Ophthalmia catarrhalis	3	1
Ophthalmo-blennorrhea	10	..
Catarrhus follicularis	14	1
Conjunctivitis traumatica	7	..
Blennorrhoea neonatorum	6	6
Conjunctivitis eczematora	..	1
Total	240	88

In all these cases good results have been obtained, and the remedy has proved superior to silver nitrate. The conjunctiva treated with Argentamine becomes paler in color; the swelling is reduced, and the secretion decreased. Vascular contraction and astringent action are quite as apparent as with silver nitrate, whilst the patient does not complain of burning and pain, and can open the lids without trouble immediately after the application. Cases of intensive irritation, such as are attributed to the employment of silver nitrate—epiphora, bepharospasmus, chemosis—do not occur at all with Argentamine. Argentamine is also specially to be recommended in trachoma, as it penetrates far deeper into the tissues and is more germicidal than silver nitrate, and does not give rise to any argentic incrustations on the cornea.

Argentamine is therefore indicated in acute and chronic conjunctival catarrhs, in trachoma, in follicular catarrh, in ophthalmic blennorrhea and in infantile blennorrhea, both as prophylactic and remedy.

Argentamine is employed in Hoor's Clinic in 5 per cent. aqueous solution, being painted on or trickled

into the eye once or twice daily, without subsequent washing with water or salt solution. Application three or four times daily is, however, quite permissible and gives rise to no danger of irritation or argyrose complications of the cornea; even ulcers, pannus and irritated condition of the iris, afford no contra-indication for its employment.

Argentamine should be kept in the dark like silver nitrate; black stains may easily be removed with potassium iodide.

—Wiener med. Wochenschrift, 1897, No. 33.

EUPHTHALMIN—A NEW MYDRIATIC.

BY DR. B. TREUTLER.

The author has investigated the action of Euphthalmin, the new mydriatic, in the Marburg University Eye Clinic, under the direction of Professor C. Hess. The new preparation is the hydrochloric acid salt of a mandelic derivative of methyl-vinyl diaceton-alkamine. It is closely related to the new anesthetic eucain, bearing the same relation to it chemically as does homatropine to tropa-cocaine.

Careful comparative experiments with the new mydriatic have enabled Dr. Treutler to publish the following conclusions:

1. The instillation of Euphthalmin solution into the eye causes only very slight and temporary inconvenience.

2. Euphthalmin is a powerful mydriatic. A 5 to 10 per cent. solution produces the maximum extension of the pupil in about the same time as 1 per cent. of homatropine solution.

3. The mydriatic action is less intensive and prompt with adults than with young people.

4. As a mydriatic Euphthalmin has the advantage over cocaine that it is more powerful in action and does not damage the corneal epithelium; on the other hand, mydriasis is somewhat slower in development.

5. Euphthalmin affects the accommodation less than does homatropine.

6. The disappearance both of mydriasis and of the paresis of the accommodation takes place much more quickly than after employment of homatropine.

7. No unpleasant effects upon the organism have hitherto been observed.

The new preparation has, therefore, several important advantages over other mydriatics of brief activity, so that it invites extended employment in ophthalmological practice.

—Klin. Monatsblatter fur Augenheilkunde, September, 1897.

EUPHTHALMIN MYDRIASIS.

At a meeting of the Medical Society of Giessen Dr. Vossius reported thata 2 per cent. solution of euphthalmin had been successfully employed for production of mydriasis. Two or three drops of the colorless solution in the eye produces a medium degree of mydriasis within 20 to 30 minutes, and disappears entirely in two or three hours. No pain nor other unpleasant effect follows the instillation, and the accommodation is unaffected. Euphthalmin is specially useful in ophthalmoscopic examinations, where the constricted pupil renders such an examination difficult in consequence of the temporary effect upon the pupils and the absence of disturbance of the accommodation.

—Deutsche Med. Wochenschrift, No. 38, 1897.

LEPROSY CONFERENCE AT BERLIN.

The International Leprosy Conference was opened at Berlin on October 11, in the offices of the Imperial Board of Health, in the presence of the representatives of the Empire and the German States, 150 doctors and delegates from all civilized States. Professor Virchow was elected chairman, while Drs. Lassar, Hansen and Ehlers, of Berlin, Bergen and Copenhagen respectively, were elected officers of the Conference. The inaugural address was delivered by Dr. Lassar. Dr. Hutchinson being absent his paper was read by Dr. Abraham.

EFFECT OF CHANGE OF TEMPERATURE ON THE BLOOD.

Friedlaender reports the results of some experiments on the effect of heat and cold upon the blood. It was found that after prolonged exposure to cold there was diminution of the red blood corpuscles, increase of white corpuscles, and lowering of specific gravity. There was no alteration in the density of the serum. After short exposure to cold the red corpuscles were increased, as well as the white; and the specific gravity was raised; serum density was unaltered. The effect of warmth was to increase both red and white corpuscles, but especially the latter; and to raise the specific gravity of the blood and the density of the serum. Friedlaender considered that perspiration probably played some part in producing the changes observed.

—Fortschritte der Medicin, July, 1897.

THE TREATMENT OF OZENA.

Moure compares the relative value of the different methods of treatment of ozena. Although none give such good results as were obtained by their inventors (Cheval claimed to have cured 91 per cent. by "interstitial electrolysis"), he protests against the attitude of those who, believing the disease to be incurable, do nothing for it; for though all cases cannot be cured, all can be greatly improved by treatment. The author first rids the nasal cavities of the dry crusts by rubbing the mucosa with cotton wool soaked in phenolized glycerine and fixed on a holder. Afterwards he puts it to the patient whether he is willing to undergo a strict and long course with a view to eventual cure, or whether he wishes simply to get rid of the crusts and smell. In the latter case he prescribes nasal and retronasal douches of one or two litres of saline, bicarbonate or boracic solutions morning and evening, to be followed by a spray of mentholized oil. If larger quantities of lotion are required, the first douche should be made with one of the above solutions, the last with half a litre of one containing a soluble antiseptic such as carbolic acid, one in twenty with glycerine and water. This suffices to do away rapidly with the smell. In the former case he prescribes nasal and retronasal douches of saline solution to be used by the patient. He himself "massages" the mucosa with a plug of cotton wool on a holder soaked in one in fifteen or one in ten phenolized or iodized glycerine every other day for a fortnight, then twice a week, and then from time to time according to the progress of the case. This massage is always followed by a douche to remove the secretions; the mucosa is then sprayed with a five to twenty-five per cent. silver nitrate solution, and finally an alkaline douche is given to remove the excess of nitrate. This often produces a slight acute coryza and headache, which usually soon pass off. After a month or two of this treatment, it is possible to discover where the purulent secretion arises, and it is usually found in obstinate cases that the mucosa alone is not at fault, but that frequently one or other of the accessory cavities is involved. Treatment must then be directed specially to this sinus. The frontal or maxillary sinus, especially the latter, can be treated directly, and then a permanent cure can be effected. With the ethmoidal or sphenoidal the most careful treatment, mopping out the cavities, or even cauterisation and curetting, may fail to cure. Such patients must undergo a regular course lasting three or four weeks two or three times a year. General constitutional treatment must not be neglected.

—Traitement de l'Ozene, Bordeaux and Paris, 1897.

TREATMENT OF ULCERO-MEMBRANOUS STOMATITIS.

Mafan, in a clinical lecture, describes under the title of ulcero-membranous stomatitis a case of septic gingivitis, which by inoculation had produced ulceration of the mucous membrane of the right cheek. This condition is often called aphthous stomatitis, but must be distinguished from it and from diphtheritic stomatitis. It requires vigorous local treatment to prevent

complications such as fistula, noma, osteitis. Chlorate of potash given internally is useless, and the treatment which has been employed for fifty years at the Hospital des Enfants Malades is to rub in finely-powdered chloride of calcium into the affected areas. On the following day the plaques become detached and healing radiply follows. If, as but rarely happens, this method fails, recourse may be had to a strong solution of carbolic acid (one in ten), lactic acid (one in three), or permanganate of potash (one in 300) applied by means of a probe covered with cotton wool. The mouth should be washed out at least twice a day as well as after food with boiled water, and the margin of the gums should be touched daily by cotton wool soaked with boracic acid.

—La Medecine Infantile, September 1, 1897.

A HAPPY THOUGHT.

Sept. 25, 1897.

Messrs. John Carle & Sons, New York City.

Dear Sirs:—I have recently used the Imperial Granum with very gratifying results, being called in consultation, when death seemed imminent, to see a child that could retain nothing whatever on its stomach. I remembered my samples of Imperial Granum and ordered it tried at once, and it was retained. The child has not vomited since, the bowels are quiet, and the patient on the road to recovery. I have also recently used the Imperial Granum in a case of typhoid fever with equally satisfactory results.

Yours very truly,

——— ———, M. D.

Physicians can obtain samples of this valuable prepared food free, charges prepaid, on application to John Carle & Sons, 153 Water street, New York City.

The Times and Register.

VOL. XXXIV. No. 12. PHILADELPHIA AND BOSTON, DEC. 25, 1897. WHOLE No. 952

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Original

ABSTRACT OF PAPER ON SURGERY OF THE GALL-BLADDER AND DUCTS.*

BY J. McFADDEN GASTON, M. D.,
Atlanta, Ga.

(Continued from last number.)

With a view to diagnosticate distension of the gall-bladder, all tumors connected with the liver should be examined with care. A peculiarly complicated case of laparotomy is reported by Bauer in the St. Louis Medical and Surgical Journal for June, 1886, in the person of a mechanic aged 40.

This case was calculated to mislead the operator, in view of the fact that "immediately below the right hypochondrium there was a tumor obviously connected with the liver, since it moved contemporaneously with that organ. It presented a semi-globular form, about three inches in diameter, was smooth and elastic to the touch and withal very tender." The author leaves us entirely in doubt as to his preconceived view by saying that although he had formed some diagnostic views on the nature of the tumor, believing that laparotomy is the only trustworthy diagnostic method, he proceeded to operate. (Query—What does an analysis of the facts prove?) (Abscess of Liver.)

An interesting case of fatal obstruction of the ilio-cecal valve by a gall-stone was reported by Dr. Rus-

sell H. Johnson in the Medical News of June 27, 1885. The author states that "the facts of the case warrant the conclusion that the gall-stone under consideration escaped from the gall-bladder by means of a fistulous tract connecting it with the duodenum," and remarks further that "autopsic examinations (especially those made by Murchison) have in many instances shown the presence of these fistulas and lead us to infer that it is not a very unusual occurrence."

A very instructive report to the New York Surgical Society, at its meeting of April 28, 1885, by Dr. Peters, detailing the results of an autopsy, illustrates strikingly this ulcerative tendency from an occlusion of the gall-bladder and the accompanying adhesions surrounding the perforation into the duodenum by which nature provides an outlet from the gall-bladder into the duodenal canal.

It is evident that the slow progress of such cases at the outset, and the gradual concretion of hard masses in the gall-bladder, favor the development of a subacute form of inflammation, which leads to suppuration in the sac and ulceration of adjacent tissues. The inflammatory action which is sometimes set up in the tissues of the gall-bladder seems to point to relief in the direction of the duodenum, and an autopsic observation of the ulcerative process by which the contents of the gall-bladder passed into this canal first directed my attention to the practicability of effecting a direct communication between these two organs.

No measure apart from that of Von Winiwarter had been adopted previously with a view to convey the bile from the gall-bladder into the intestinal canal. In his case the gall-bladder was first united to the colon, and after the lapse of some time he established a fistula between the sac and the small intestine by uniting them with stitches, suturing the intestine to the abdominal wall, and opening the gut on the fifth day, puncturing the opposed surfaces through the incised intestine, and finally closing the latter with sutures. This operation of Winiwater was intended to remedy the occlusion of the common bile-duct by effecting an artificial communication with the intestine for the passage of the bile, and while it failed to realize the advantages expected from a cholecysto-duodenal outlet, the partial success of this procedure shows the tolerance of similar measures by the respective structures involved. No complications arose in Winiwater's case from the coils of intestine, the constriction of its lumen, or the regurgitation of its contents into the gall-bladder; and much less are such difficulties likely to occur in the attachment of the sac to the duodenum.

The practical discernment of Harley led him to the conclusion that the triumph of operative surgery would be to establish an artificial fistula between the gall-bladder and the duodenum. For then not only would the pent-up bile be removed, but the disturbance arising from the non-admittance of bile into the intestines likewise be at the same time overcome. I am not quite sure, he remarks, if, in these days of antiseptic surgery, the operation is not quite practicable; for I can see no reason why the adjacent surfaces of the gall-bladder and duodenum should not be eroded by potassa-fusa and speedily stitched together.

The principle of cholecysto-duodenal communication seems to have been grasped in this suggestion for creating a fistulous opening; but the process of accomplishing it presents objectionable features, which do not hold against the plan of uniting the two walls by a loop of suture which shall induce an amount of adhesive inflammation sufficient for the union of their outer surfaces, with a certainty of cutting through the adjoining tissues and effecting a passage for the bile from the gall-bladder into the duodenum.

Harley is justly entitled to priority for the publication of this suggestion "to establish an artificial fistula between the gall-bladder and duodenum," as his book on Diseases of the Liver, which contains it, appeared prior to the publication of my article in Gaillard's Journal on "Obstruction of the Gall-duct and Its

Bad Consequences, with Remedial Operation Suggested." But it is due to myself to state that his work had not been seen, nor was I aware of his suggestion when my paper was published. In like manner it may be stated that I did not know of the operation of Winiwarter, though it was recorded in a foreign journal in 1882, and published in the October number of the American Journal of the Medical Sciences in 1884.

But, putting aside the question of priority, it is proper to note the difference in a predetermined recourse to the ligation for opening a communication from the gall-bladder into the duodenum, which shall at the same time induce a firm union of their outer surfaces, from an incidental attachment of the sac to the large or small intestine, as done in his case. It must be perceived that his mode of proceeding has quite a dissimilar effect from the operation that was suggested by Harley, or from that process which I adopted afterwards for establishing the flow of the bile into the duodenum, which McGraw has indorsed.

The close proximity of the duodenum to the lower and under-surface of the distended gall-bladder, with more or less thickening of its wall, affords favorable conditions for this operation; and it is evident that greater tolerance of the textures for surgical interference is presented after the disorders connected with biliary obstruction have diminished the tendency to active or acute inflammation.

A class of operations calls for attention in connection with impaction of biliary calculi in the cystic or common ducts which cannot be dislodged by the means already mentioned. The incision of the wall of the duct by the knife or scissors, constituting this operation for the removal of stones, has in most cases been closed afterwards by suture, but when this is impracticable it may be left open and the intervening space should be packed with gauze, leaving the ends protruding at the external wound, to afford drainage and prevent the entrance of bile into the peritoneal cavity.

The various modes of procedure adopted by different operators in effecting cholecystenterostomy include anastomosis of the gall-bladder with the duodenum, the small intestine and the colon, by different processes besides that of union by a stitch of silk thread or the elastic ligature.

The attached surfaces have been sutured, with the cut edges brought together or the division made after nearly completing the circuit. The bone-plates have been employed to approximate the walls of the gall-bladder and intestinal canal, and the Murphy button has latterly been used in most cases for this anastomosis.

There has been a fair measure of success by each of these procedures, and the choice of operators in the future will depend to a considerable extent upon the conditions presented in the individual cases.

NOTES ON SOME OF THE CLINICAL FEATURES OF TUMORS, THEIR ANATOMICAL CHARACTERS, MORPHOLOGICAL ELEMENTS AND THEIR THERAPY, BY TENTATIVE, CONSTITUTIONAL OR RADICAL MEASURES.

BY THOMAS H. MANLEY, M. D.
NEW YORK.

FIBROUS TUMORS.

All neoplastic formations of a non-malignant nature present one fairly uniform characteristic in their structural composition. They preserve the same histologic elements as the matrix tissues from which they spring; hence, fibrous tumors may be looked for only where fibrous tissue abounds. But if we exclude the tendons and ligaments we will note that this tissue largely serves as a supporting and protective envelope of many organs and structures, and in the integument is quite inextricably intermixed with smooth muscle and elastic fibre; hence the reason that pure fibroma, without the admixture of other heterogenous anatomic elements, is exceedingly rare, and why those indurated masses lodged in various regions of the body are more generally designated fibro-myoma, fibro-adenoma, fibro-lymphoma, etc. For the greater number of these the term, from a clinic standpoint, would be more properly "fibroid."

At the present this term is reserved for those growths which so frequently involve the walls of the uterus, although, strictly speaking, this term, from an anatomic standpoint, is as inappropriate here as elsewhere.

However, it as accurately describes the pathologic state as "myoma," for the reason that, although these masses contain more or less smooth muscles, fibre and myxomatous tissue, in some of them, of a hard, ivory feel, the dominant structure is an avascular, fibrillated stroma, devoid of muscular elements.

The most favored site of fibrous tumors is in the periosteum; not infrequently extending into and involving the cartilage elements or perichondrium of the articulations.

As an osteo-fibroma we find its most common habitat in the buccal cavity, especially along the gingival borders of the mandible, though it may seize on the upper jaw or the hard palate. Here situated I have more than once seen it mistaken for "sarcoma."

One clinic peculiarity about epulis it is well to have in mind, viz., that like nasal polypi, unless radically cleared away by complete eneucleation it may promptly return; this, too, when no malignant elements can be found in it.

Thus, as an example, three years ago I removed a periosteal fibroma from the lower jaw of a young, pregnant woman. Owing to her condition it was thought best to depend on cocaine analgesia. The growth was small and the operation quickly performed. Healing was prompt, but it reappeared and grew with alarming rapidity. After her confinement it had attained such enormous dimensions that a formidable operation had to be performed to clear it out from its deep connections with vital parts, but it was distinctly encapsulated, and loose, easily decorticated.

This time I freely cauterized its periosteal base with pure nitric acid and allowed the large wound to heal by granulation.

The parts closed in readily and

there has been trace of return since. The tumor weighed 25 ounces. On microscopic examination it was found to be made up quite wholly of fibrous elements, with a moderate admixture of myomatous structure.

This is a group of tumors of serious import when they are so lodged as to interfere with function or compromise vital organs.

Their growth is usualy slow, unless they include other more vascular structures or become inflamed.

As they in most instances lie near the surface their extirpation may be easily effected, but when they are of considerable volume, when lodged in the passages or in deep structures, one should not undertake their removal without being fully equipped with all the resources of effective surgery.

In a considerable number, however, when of a mixed character, before resort to sanguinous measure, conservative expedients should be perseveringly tested.

The gummata of syphilis and the adenoid induration of strumor may be confounded with fibromata. Therefore, when doubt exists as to the character of the neoplasia constitutional remedies should be plied with a free hand.

If medicative resolution may be effected a great boon is conferred on our patient.

Heitzman in his work on histology, speaks out a few words of plain truth which it would be well for us to imitate when writing on problems yet enshrouded in great mystery. In dealing, for example, with the subject of osseous repair after fracture, he says that the statement that "the effused blood corpuscles are re-scrbed" is simply the refuge of ignorance, for about that we know nothing definite yet.

This is well for the skeptics to heed when they turn with contempt from every description of treatment for tumors but cold steel.

An amputation has been designated the opprobrium of surgery, a most extreme and deplorable, but sometimes an imperative, resort. The removal of a tumor by dissection is always a serious undertaking however it may be regarded; it unhappily is a confession of the impotency of medicine to reach those pathologic changes induced by some unknown systemic influence. But many tumors, and notably those of a fibrous origin, are capable of dispersion by local and constitutional remedies; by rest, pressure, hypodermication, friction, a cupuncture, electricity and other means.

It is true that under most circumstances the surgeon has but little discretion in the matter, as the case is referred to him for "operation." A better word would be treatment. His fort is chiefly dealing with traumatic and pathologic lesions, deformities and new growths.

If he may secure the desired end without spilling blood or mutilating it should not detract from his reputation as a conscientious and skillful member of his craft.

Therefore, he who would pose as the complete and ideal surgeon must thoroughly acquaint himself with something more than operative skill and should be thoroughly cognizant of the action of internal medicines.

Editorial

THE TIMES AND REGISTER is published Bi-weekly—Twenty-four issues a year.

All communications, reviews, etc., intended for the editor should be addressed to 367 ADAMS STREET, DORCHESTER, BOSTON, MASS.

THE TIMES AND REGISTER is published by The Medical Publishing Co., 717 Betz Building, Philadelphia, Pa., to whom all remittances should be made by bank check, or postal, or express money order.

Subscription price is $2.00 a year in advance. Foreign countries, $2.50. Single copies, 10 cents.

Advertising Rates may be had on application at the Philadelphia office.

Original articles of practical utility and length are invited from the profession. Accepted manuscripts, will by paid for by a year's subscription to this journal and fifty extra copies of the issue in which such appears.

Reprints of Original Articles are not furnished except on payment of cost price by the author.

Entered at the Philadelphia Postoffice as second-class mail matter.

UTERINE CANCER.

In another place in this issue will be found the full translation of one of the most valuable contributions on the clinic and therapeutic consideration of uterine cancer.

W. Jacobs has placed the profession under an obligation to him for his candid and impartial utterances on this terrible malady.

In the beginning it will be noted that the number 69 is quite ample to draw rational inferences from, besides he had every type of the dread malady—in the young, middle-aged and the old—and he had a considerable proportion of cases in which only the cervix was involved. Alas! what a sad commentary on results after the best that surgery can offer —but two alive after two years!

Who that has had any experience in uterine cancer has ever witnessed such a terrible mortality under conservative treatment.

Yet there are those intemperate enthusiasts who will tell us that cancer "is a surgical disease;" but Jacobs in his essay informs us that "vaginal hysterectomy for uterine cancer is probably the best palliative remedy we have."

But his statistics most positively conflict with this notion. For under any treatment the results could not be worse.

The youthful, vigorous maiden, we are told, is the worst possible subject, as up to 45 prompt return is inevitable. After that stage of life, as the malady often pursues a chronic course and the shock of operation is very great, surgery is interdicted.

Dr. George Fischer (Surgery of One Hundred Years Ago, Jour. Med. Ass'n, No. 20, p. 1061), in writing on the views of our forefathers in surgery in cancer, says: "Those fundamental principles in which we agree with our forefathers are the following: Cancer in the beginning is a purely local affection; it must therefore be entirely and perfectly removed as early as possible. It is cur-

able by surgery, and extirpation constitutes the only prospect of success; medicines are of no avail. We agree to this doctrine. Who? Certainly not all of those whose experience with various types of cancer is the greatest. On the contrary, the opinion is fast growing that operative surgery has been altogether overdone in many types of this malady.

We have no proof that "the affection is originally local," but we have no little clinic evidence that there are many medicinal agents which sometimes hold the disease in abeyance.

Let us then, unless the indications for hysterectomy are positive and specific, in exceptional cases, once more turn back to our old friends, local caustics, astringents, sedatives and tonics. At all events, let us be honest and not pretend to powers which we do not possess, and candidly confess that the essential features of cancer are still as deep a mystery as ever.

A MEDICO-LITERARY CAUSERIE.

SURGERY IN THE FOURTEENTH CENTURY.

Among the principles of surgical practice as set forth by Mondeville by no means the least important is the successful extraction of the fee. A man of little skill, he says, will be more successful than if he had a thorough knowledge of his art, if he only knows how to make his patients pay. To be careless of the fee is, he holds, to be careless of the welfare of the patient. A surgeon who is uncertain whether he will be paid cannot give proper attention to the case which he has in hand:

"His mind's eye will be completely darkened, and we may say of him with the psalmist, that he hath eyes and seeth not. His examination will be perfunctory, and he will always be making excuses and finding fresh pretexts for putting off. If he has pocketed his fee the blind man sees and the halt man walks, or rather runs."

For this reason, says our author, a surgeon's chief thought should be for his fee. Once paid in full let him be content, but until he has got his fee let him not cease to ask for it, and let him not accept either surety or promise, but only a pledge or hard cash (Nec umquam a paciente sumat plegium sive fidem vadium sive nummos).

Courtesies and presents from a certain class of patients may be traps for the unwary. Mondeville warns his disciples against dining with patients who have not yet paid, for "such a dinner always takes off something from the fee." In vain is the snare set in the sight of any bird, but it may sometimes happen that over-caution may itself prove a snare. Trosseau had learned by experience to fear the grateful patient who brought a gift when he owed gold, and was at last driven to protect himself against this unprofitable thankfulness by resolutely declining to accept presents. On one occasion a great lady whose child he had saved from death begged him to accept a little silk purse which she had worked for him with her own hands. Seeing, as he thought, the snare, the great physician said: "Madam, it is my rule not to accept presents. My fees amount to 1000 francs." The lady replied: "I am sorry to have unwittingly infringed your rule. I had ventured to put ten 1000-franc notes in this purse. Allow me to present you with one of them!"

Mondeville, however, sees no objection to the acceptance of presents, such as jewels, goblets or gold or sil-

ver, rich stuffs and the like from friends—from whom usually nothing else is to be got. Sometimes their gratitude may need a little gentle stimulation. It would, of course, our author admits, hardly be decent for the surgeon to apply this treatment himself, but his servant can do what is required. For instance, if anything is hinted as to a fee, a discreet retainer can speak, "behind our backs, as if we knew nothing of it," in this wise:

"By no means! My master would not like that. You would do better to offer him a cup or something of that kind, although I am certain he would not accept it."

From those who are poor but not quite destitute, fowls, geese or whatever else they have to give may be taken. The cardinal principle of Mondeville's teaching in the matter of fees is that the surgeon should always and in all circumstances take what he can get. He must not let himself be deceived by appearances. Rich folk are accustomed to come to him in the garb of poverty, or if they are well dressed they allege all manner of untrue reasons for it, that they may make him lower his fee.

Mondeville's experience would seem to have been unfortunate, for he says:

"I have never found any man rich enough, or rather, honest enough, of whatever station of life, religious or other, to be willing to pay that which he had promised without being compelled or pressed to do so."

Therefore, he says, the surgeon should in the matter of fees deal with his patient as the costermonger of the ballad did with "the donkey which wouldn't go."

"As a driver who spurs his ass has but one thought—to go quickly—and the lazy ass, in resisting, has precisely the opposite thought and seeks to go slow, thus toward the end of the treatment we should, unless we have been paid in full, resist the patients who press us, dawdling like the ass, and insist on having our money if we dare. If not, we must have recourse to delays and subterfuges; we must plead the inopportuneness of the moment, the disobedience of the patient, the want of medicines and money, so that the patients may see that unless they first pay the surgeon the treatment will last forever."

Mondeville returns again and again in various parts of his books to the subject of fees, breaking out in unexpected places into vehement denunciation of the meanness of patients, especially the wealthy, who forsooth think they pay a surgeon enough if they give him 12 denarii, or 2 sous a day, as they might to a mason, a tanner or a tailor. It may be mentioned that in purchasing power the sou during the first half of the fourteenth century was equal to about 4 francs at the present day. But our author urges that as the human body is to be preferred to everything else, the surgeon must not be content with a small fee or none at all for having saved an arm or a hand. He proceeds:

"When, therefore, a patient comes for the first time to a surgeon, the latter before asking for a fee should consider first his own circumstances; secondly, those of the patient; thirdly, those of the disease. As regards the first, the surgeon should consider whether he is celebrated, better known than his brethren, the only one in his country, rich, etc. As regards the second, he may know that his patient is rich or poor, or has rich friends; for instance, whether he be the son or nephew of a bishop or an abbot. If he does not know it he must make careful inquiries or have them made by his assistants, inasmuch as sometimes, and even often the rich come to the surgeon clothed like poor folk."

If he suspect this he must invent a pretext for delay till he has time to make inquiries. As regards the disease he must take into account the difficulty and length of treatment, whether there are few who can treat such a complaint, and all the other important elements in the situation. If the circumstances are favorable the surgeon ought boldly to ask a high fee. To the rich he should say:

"It appears to me that for this cure the surgeon should receive a hundred pounds."

If this causes great astonishment

the surgeon should pitch his request in a lower key:

"I do not say that I wish to get as much, but that it ought to be so, and see you carefully to it that the surgeon be recompensed for his trouble, his knowledge, and his applications, if it be he who has paid for them, and that he be distinctly obliged to you."

Then, after having heard their reply, the surgeon will gradually abate his demand, selling his services, as it were, by a Dutch auction. A surgeon who is well known should, it is recommended, always have a minimum fixed in his own mind for which he is ready to treat the case; he can then ask more than double, so that he can, if necessary, reduce it one-half, but not below this point—"this would be shameful." This method of bargaining for a fee is, it would appear, the regular custom in China. A well-known London dentist some years ago sent in an account for professional services to the representative of the Celestial Empire of that day and was disagreeably surprised to receive a cheque for one-half the amount. On remonstrating it was explained that no affront was intended; it had only been taken for granted that the account had been drawn up on the basis generally accepted in China, and it had accordingly been dealt with in the usual way.

Mondeville's principle was, in fact, that of Robin Hood, who robbed the rich to help the poor:

"I repeat the surgeon must ask without measure from the rich and get out of them as much as he can; provided, however, that he spend all the surplus in dressing the poor."

Preventive treatment, as being unprofitable and hurtful to the surgeon, should be reserved for patients belonging to one of the following categories: 1. The really poor, for the love of God. 2. Personal friends (but even from these, as we have seen, the surgeon should get what he can in the way of presents). 3. Those who are known to be truly grateful after a complete cure. 4. Those who pay badly, such as persons in authority and their kindred —chamberlains, justices, bailiffs, advocates and all those to whom it would not be prudent to refuse advice. The longer a surgeon treats such people the more he loses by it; therefore, let him dispatch them as speedily as possible and treat them with the best physic. 5. Those who pay fully in advance. In all other cases Mondeville thinks preventive treatment an unnecessary stretch of virtue on the part of a surgeon.

Those who pay after cure according to the trouble given should not be cured too speedily:

"Let us give them medicines that work slowly and weakly, in the hope that they will pay pro rata of the time taken. In the case of all these and the like folk let us allow the disease to grow, telling them that thereby nature rids herself of many superfluities which would be dangerous if retained inside. Let us forbid them perspiration, repose and abstinence, telling them that the sweat dissolves the subtile part of the humors, leaving a grosser residue which is capable of doing harm; that tranquillity and repose multiply the cold and corrupt humors which lessen the natural heat and make a man indolent in his actions; that abstinence weakens the healing power which ought to cure the disease, and fills the stomach with unwholesome humors, which multiply and increase the materies morbi. And since there is no faith in Israel, and truth is without strength in public places, we prefer, if need be, that one thing should happen rather than the other —to cozen the cozeners rather than to suffer hurt from them. Let no one deem from that which has been and will be said that I wish to teach evil doing, but rather to know it well in order to avoid it, because one avoids only that which one already knows. If anyone understand in an evil sense the words which have been said it will not be on account of the frankness of the speech, but on account of the malignity of the hearer. Let them therefore take heed with the psalmist, who says: 'Shun evil and do good, seek peace and cultivate it.'"

Mondeville sums up the qualities that should go to the making of an operating surgeon as follows:

"That he should not be afraid of stenches; that he should boldly cut or kiss like an executioner; that he should lie like a courtier, and that he should know how cleverly to extract reward or money from the barbarians. (Quod oudacter seindat aut interficiat sicut carnifex, quod curialiter mentiatur et quod sciat subtiliter a barbaris pretium aut pecuniam extorquere.)"

One cannot, however, help feeling that Mondeville's cynical insistence on the paramount importance of the fee and his instructions in the great art of spoiling the Egyptians are the expressions of an honest mind soured by deception and disappointment rather than of sordid greed of gain. The fact that he did not amass much wealth would appear to show that he did not himself practice what he preached. He thought nobly of his profession, as may be gathered from the following passage:

"You, therefore, surgeons, if you have worked conscientiously with the rich for a proper remuneration and with the poor for charity, you need fear neither fire nor rain nor wind; you have no need to enter monasteries, to make pilgrimages, because by your knowledge you can save your souls, live without poverty and die in your houses. Live in peace and gladness, and rejoice, for your reward is great in heaven."

Like Carlyle, Mondeville held that whoever else may be wrong, the doctor, at any rate, who through his whole life passes by doing good is in the right.

—The Practitioner.

Clinical Medicine.

In charge of DR. J. J. MORRISSEY.

NEUROPATHIC DYSPEPSIA.

In an interesting communication to the Lancet Dr. A. Ernest Lansom, writing on "Neuropathic Dyspepsia and it Correlation with Disturbances of the Rhythm of the Heart," draws the following conclusions: (1) Essential tachycardia is not accompanied by dyspepsia, (2) paroxysmal tachycardia and the forms of tachycardia, accompanied by signs, even slight, of Basedow's disease, are very frequently associated with crises of dyspepsia; (3) extreme cardiac arhythmia often occurs without manifestations of dyspepsia, (4) gastro-intestinal irritations do not produce cardiac arythmia without the concurrence of predisposing causes, (5) cardiac arythmia often replaces tachycardia in Basedow's disease; in such cases paroxysmal dyspepsia is frequent; (6) well-marked trachycardia may exist without signs of dyspepsia; (7) paroxysmal bradycardia is associated with crises of dyspepsia, and these crises sometimes occur in persistent bradycardia; (8) there is no defined relation between dyspepsia and the structural diseases of the heart, which sometimes are manifested in cases of disturbed heart

rhythm; (9) it is most probable that all forms of disturbed rhythm of the heart are due to marked affections of the nerve element at the origin or in the course of the vagi nerves or the nerve mechanism of the cardiac reflex in the upper part of the spinal cord; (10) the attendant dyspepsia is due to an extension of the disturbance to the areas of origin or course of the gastro-intestinal branches of the vagi nerves; (11) all such alterations of the reflex nerve mechanism, as well as the various disturbances of digestion, may be due to toxic influences.

NEW REMEDIES.

The unsatisfactory basis upon which medical knowledge is established in many of its relations with disease is one of the principal causes that leads us to eagerly seize upon new remedies. Thousands of highly-lauded preparations are yearly launched upon the commercial medical market, backed up by testimony from practitioners in various obscure portions of the country who seem to have a grudge against their colleagues in advocating some unmeritorious remedy, or an ungovernable desire to see their names in print. The ubiquitous agent appears daily in our office, consuming valuable time in extolling some preparation which but a short year ago, while traveling under the aegis of another concern, he was only too ready to condemn in the severest terms. Physicians must be a very gullible class, for the majority are ever willing to accept as gospel truth the hackneyed praises of an article which has no real necessity for its existence aside from the business interest of the house in which it is produced.

It frequently happens that the more obscure the house the greater the magniloquent representations made concerning its product.

On the other hand it is a decided relief to turn to some of the great drug houses of the country, the managers of which are constantly keeping to the front the results of accurate scientific investigations in the preparation of high-class pharmaceutical preparations. The combinations of remedies which they offer are frequently of distinct advantage to the art of therapeutics, and are often based upon suggestions tendered by leaders in the profession.

It is time, therefore, for the discriminating physician to relegate many of the new-fangled remedies coming to him under the guise of indispensable factors in the treatment of various diseases to the darkness of obscurity and not to permit himself to be led as the gentle lamb to the slaughter.

This statement is particularly applicable to foreign importations. The name of some well-known German house attached to a recently patented article appears to be a voucher for its respectability and therapeutic quality, and it is only after months of patient trial that we reluctantly acknowledge our disappointment. We are too often inclined to seek abroad for the latest discoveries in drugs and other remedial measures and close our eyes to the legitimate and important work that is being daily accomplished in our own country.

It should be the duty of American physicians to heartily and cheerfully accord to the enterprise and business sagacity of our own manufacturers the encouragement which we have so frequently tendered to those of continental Europe.

Whatever has been done abroad can be accomplished in America, and at less cost to our patients.

For family or medicinal use there is none better than the Jesse Moore whisky, either Bourbon or Rye. In cases or bulk. Jesse Moore, Hunt Co., Louisville, Ky., or L. Heineman, agent, Jamestown, N. Y.

Electro-Therapeutics

DR. S. H. MONELL, Brooklyn, N. Y., Editor.
Chief Instructor of the Brooklyn Post-Graduate School of Clinical Electro-Therapeutics.

ELECTRO-DIAGNOSIS FOR THE GENERAL PRACTITIONER.

BY S. H. MONELL, M. D.

A few words on this subject will clear away some of the confusion that pertains to it. There is no known method of "diagnosing diseases by electricity," as the average physician understands the word diagnosis. Many of the conclusions of experimenters in the study of electro-diagnosis are erroneous or of no practical value. In the treatment of patients a number of things may appear which confirm or alter previous diagnosis or affect views of the prognosis of the case, and occasionally some test of the electrical reaction of a part may be made in advance of treatment, but the complete examinations of nerve and muscle reactions set down as necessary in chapters upon electro-diagnosis do not enter into practical medicine.

The diagnosis of the general practitioner may be made by the usual clinical methods and treatment instituted accordingly. During electrical treatment we may find an unsuspected area of great sensitiveness or great dullnes of sensation, or we may find that muscles contract less quickly than in health, or that the results of the method we have selected do not prove satisfactory. In all these cases we must look for the cause and diagnose the condition by familiar methods of practice.

The electrical irritability of nerves and muscles may differ in two ways —in quantity or quality. I know of nothing in the literature of medical electricity so lacking in practical value and so totally useless to the physician as the laborious efforts that have been made to develop electro-diagnosis. Much attention has been given to the subject by ingenious and devoted men, but their work has availed little. As a curative agent, as a palliative of symptoms in incurable cases, as a means of deciding from the results of treatment between two suspected but undetermined conditions, and as a help in arriving at an early prognosis, medical electricity possesses a value which easily places it in the front rank of extra-drug remedies, but there is no system of electro-diagnosis of general diseases, such as make up the routine of office practice. As a matter of fact I would about as soon think of questioning the patient in the Sanscrit language to obtain a history as to put him through the technique of interrogation with a pair of electrodes in the manner recommended in some writings upon electro-diagnosis.

Diagnostic and therapeutic hints of great value may develop during the treatment of complicated cases, as we discover abnormal sensations and unusual effects and carefully investigate their cause by inquiry and by other methods of physical diagnosis. This, however, seems to me something quite apart from the idea of electro-diagnosis presented to the physician's mind by his readings of electrical reactions, quantitative and qualitative changes, increased or diminished excitability and the reaction of degeneration.

It is, however, the only practical part of electro-diagnosis in clinical experience. An author of a work upon electro-therapeutics begins his chapter on electro-diagnosis by stating: "When a patient with any disorder of the nervous system presents himself for electrical treatment it is nearly always necessary to begin with an investigation of the electrical reactions of his nerves and muscles. The motor nerves and the skeletal muscles should be investigated first and both the faradic and the continuous currents must be employed. The unipolar method must be adopted and the tests must be applied to the motor nerves, the muscles and the cutaneous sensory nerves in the parts affected, and they must be compared with the same parts of the sound and healthy side. To do this it is absolutely essential to know thoroughly the points where the nerve trunks are most accessible, the motor points of the muscles and the distribution of the cutaneous nerves."

Such a method of examining patients seems to me difficult to consider in office practice, and the most careful researches which I have been able to make into the disclosures which would result from such examinations do not reveal recompenses for the time and trouble. The procedure is inaccurrate, does not determine the nature or cause of the disease in important cases when such information is desired, and belongs to the realm of theoretical and experimental work rather than of practical therapeutics.

An increased or diminished sensibility to a given electric current will often indicate a departure from the normal in the state of the tissues through which the current passes, but it very seldom discloses the diagnosis of the lesion. The nearest approach to exactness in electro-diagnosis is the test to determine between a central and a peripheral paralysis, but even to this rule there are exceptions, and the discovery of the reaction of degeneration does not make clear the exact cause behind it. This is upon the surface of the body. Within the pelvic cavity there are some important diagnostic suggestions derived from the behavior of the tissues under electric currents, which must be studied separately.

How to locate motor points without a chart is one of the perplexities of students of medical electricity which cease to trouble after a little practice.

Place any ordinary sponge-covered flat electrode upon a folded towel on the knee of the patient and let him rest upon it the flexor surface of the forearm, a couple of inches above the wrist. Connect this electrode with the positive pole of a high-tension induction coil apparatus.

Take an ordinary sponge-covered hand-electrode, moisten it with warm water and rub it a few times over a cake of soap. Connect it with the negative pole and pass it up and down and over every portion of the arm of the patient, from the shoulders to the finger tips. The proper current strength must first be found. Switch the 800 yard No. 32 coil, rapid vibrator and three cells into circuit. After contact is made with both electrodes, increase the current in the secondary circuit from zero until it produces some visible contraction of muscles as the negative electrode is moved about over the arm.

As the labile electrode is promenaded over the surface of any part of the arm, or forearm, the presence of each motor point will be exactly demonstrated by a contraction of the muscles supplied. If the electrode is swept back and forth the contractions will follow each other in a series of waves. If the electrode is steadily held upon the motor point the muscles will be fixed in a tetanic contraction as long as the electrode is on the motor point, and the intensity of the contraction will be exactly proportioned to the E. M. F. of the current.

The patient can next reverse his arm and place the extensor surface upon the stationary electrode. The operator need never look at any chart of electro-therapeutic anatomy for assistance to locate motor points. Every movement of the fingers, wrist, elbow and of the muscles acting upon them, can be practically

demonstrated on the patient without any previous knowledge of charts and diagrams.

It is a simple matter to go over the entire arm in this way. By placing a stationary electrode upon the back of the neck, another electrode may be moved over the sides of the neck and face, and the motor points of these regions located on any person whenever it is desired to do so.

With the patient recumbent, and a positive flat electrode under the abdomen, a labile negative electrode may be moved over the area of the back, and its motor points located at will.

By turning the patient over and putting the positive electrode under the cervical spine, or sacrum, the motor points of the anterior trunk may be demonstrated by the labile electrode as it passes over muscles.

By standing the patient upon a foot plate and promenading an electrode up and down each limb from the hip to the ankles, the motor points of the leg can be easily traced.

Current Medical Literature.

NOTES FROM MEDICAL PRACTICE.

BY GEORGE A. TOLMAN, M. D.,
Dover, N. H.

The following brief remarks are based upon my experience with some of the more recent additions to the materia medica.

Since the introduction of trional as a remedy in neurotic conditions, I have employed it in many cases and have carefully noted the results. As a general nerve sedative, especially in insomnia of neurasthenics, I have found it of the utmost value.

I have failed to detect cardiac depression, even when given in maximum doses (gr. xl). Yet a conservative physician wil always guard his patient against any idiosyncrasy, and during its use in maximum doses administer conjointly either nitroglycerine or citrate of caffeine. The following cases serve well to illustrate its value:

Mrs. T., aged 26, was troubled with insomnia. Nearly all the hypnotics usually used in such cases had been exhibited without relief. I tried trional in 30-grain doses with most gratifying results.

Mr. W., aged 65, suffered from melancholia, complicated with most obstinate insomnia. Trional was prescribed in 40-grain doses, combined with nitroglycerine, gr. 1-100. The patient was able to enjoy refreshing sleep for the first time in several weeks. Trional in larger doses, combined with caffeine citrate or nitroglycerine, has also proved itself invaluable in several cases of delirium tremens.

For coughs, especially irritating coughs, I have found phenacetine, gr. 2 1-2, combined with ext. glycyrrhizae, codeine, gr. 1-8, and sacch. alb., to give more relief than any other combination.

In conclusion, I report the following case as an illustration of the excellent results obtained in the treatment of chancroids from the use of aristol.

Mr. B., aged 22, came to my office for the treatment of chancroids. He had previously been circumcised, and around the cicatrix was an almost complete circle of chancroids. After using a caustic I prescribed an ointment of aristol and lanolin. In three weeks under this treatment the chancroids healed.

Aristol ointment is a favorite dressing with me in similar cases.

REPORT OF TREATMENT OF SECONDARY ANEMIAS, WITH CASES.

BY J. A. STOUTENBURGH, M. D.,

Late Resident Physician, Columbia Hospital, Washington, D. C.

These anemias accompany or follow other abnormal conditions, and play an important part in their course. If not relieved they prolong the original attack, and when convalescence is finally established leave the patient a shining mark for those infectious diseases which claim for their victims those whose resistive power is below the normal standard.

In most anemias the blood is diminished in volume, the corpuscles in number, and the hemaglobin sometimes falls to less than half the normal percentage. As a result the oxygen-carrying power of the blood is impaired, tissue metamorphosis retarded and nutrition of the whole body suffers in proportion to the degree of the anemia. There is loss of appetite and constipation, and the work of living is but lazily done.

TREATMENT.

First. Regulate the bowels. For this podophyllum in small daily doses is effective. Second. Cause patient to drink freely of good water, boiled preferred, taking a glassful hot three-quarters of an hour before each meal. This fills up the circulation and facilitates excretion of waste products. Third. Give appropriate treatment for the original disease, and fourth, we need a remedy, or combination of them that will increase the oxygen-carrying power of the blood, increase the appetite and stimulate the stomach and intestines to renewed activity.

Many so-called blood-makers attempt to do too much for us by supplying pre-digested and artificial food. It is better to give nature a chance, by coaxing her to resume her work, and then furnishing a nutritious and easily digestible diet.

Gray's Glycerine Tonic Compound is a preparation meeting the fourth requirement, and it has done me excellent service in many cases besides those here reported. It is made by the formula of Dr. John P. Gray, a combination of sherry wine, phosphoric acid, gentian, taraxacum, glycerine and aromatics.

The following cases from my notebook will best illustrate my points:

Case 1.—Mary P., aged 24, seen first June 11, 1897.

History.—Had several attacks of malaria during fall of 1896, intermittent and remittent types; suffered two severe attacks of bronchitis during February and March, and had malaria again in May. Has been sick now six days.

Examination shows a profound anemia, rapid and very small pulse, temperature varying from 99.6 degrees to 103 degrees, as shown by later observations. Diagnosis, remittent malarial fever and anemia.

Treatment began with calomel, followed by quinine in doses of five grains every hour for four hours each morning, and small doses of podophyllin at night,plenty of boiled water and a liquid diet rich in nitrogenous elements. Fever continued one week, but being convinced that anemia was partially responsible for it, on third day ordered Gray's Glycerine Tonic Compound in half-ounce doses every four hours before taking food. This was continued four days with quinine as above, when temperature was normal. Now put on full diet, tonic continued before meals and quinine gr. ii after meals. Treatment continued ten days, when patient reported a gain of four pounds, great increase in strength and growing appetite; pulse strong, appearance much improved. Tonic continued ten days longer, when a fine color and strong pulse evinced perfect health.

Case 2.—Margaret G., aged 36, widow, first seen May 17, 1897. Took cold in March; had a constant cough, lost appetite and flesh; constipation and has sweats and fever. Has taken several preparations of cod-liver oil, iron, hypophosphites and various cough mixtures without material relief.

Examination.—Roughened bronchial respiratory murmur, small moist rales over left apex, some dryness and fine whistling rales over right; no dullness elicited; anemic

murmur at base of heart; pulse soft, 100; expectoration scant, glairy.

Treatment.—For bowels, same as Case 1, boiled water to be drunk freely, and a mixture containing codeine 1-6 grain and beechwood creosote m. i. in dr. i of strong syrup of ginger, to be taken every four hours to relieve cough. Gray's Glycerine Tonic Compound was begun at once, taken after meals on account of irritable stomach.

May 27.—Cough slight, no expectoration or sweats, sleeps and eats well; auscultation - respiratory sounds much improved, a few moist rales over left apex; Codeine mixture given twice a day, Tonic continued.

June 7.—All symptoms have disappeared; examination negative; pulse strong, condition excellent, although she is supporting herself and children by hard work.

Case 3.—Annie V., aged 23, married; first seen June 23. Aborted at the third month two weeks ago. Had profuse hemorrhage then, and it has continued in varying quantity to date; is thin and pale; has fever, sweats, severe backache and pelvic pain.

Examination showed enlarged, tender uterus, with sanguino-purulent discharge; pulse 120, small and soft, mucous membranes very pale. Diagnosis, sepsis and anemia, following abortion and hemorrhage.

Treatment.—Thorough curetting with gauze drainage, changed every second day after irrigation with normal salt solution. The glycerine tonic and quinine were given as in latter part of Case 1. In one week the temperature was normal, no tenderness or pelvic pain, general condition much improved, tonic continued before meals, and elixir lactopeptine after meals to aid digestion. On fifteenth day patient said she was almost as good as new; appetite splendid, digestion and assimilation perfect. Patient discharged cured July 13, having gained nine pounds in 20 days.

Case 4.—Mary M., 42, widow; first seen June 5, 1897. Was operated on for fibroma uteri one year ago, ovariotomy and partial hysterectomy being done. Since then has suffered constantly with stubborn constipation, anorexia and indigestion. Of late has had constant headache; cannot retain food; bowels not moved for six days; has distension of abdomen, coming on every afternoon, accompanied by intense pelvic pain.

Examination showed marked anemia, tympanites, bowels loaded and a fibroid reaching half-way to the navel and nearly filling hollow of sacrum.

Treatment.—Enemata to clear out bowel; copious drinking of hot water; liquid diet; hot stoups for pain. Improvement is rapid. On the third day retained food. Gray's Glycerine Tonic Compound in tablespoonful doses, well diluted, was given before meals and quinine gr. 2 afterward; food gradually increased. On the fifth day bowels moved naturally, distension ceased and appetite improving. One week later was much better; good appetite, bowels moving daily; is now doing her own work. She drank hot water before meals and continued the tonic for two weeks longer, when she reported that she was in better health than for years and had gained eight pounds since beginning treatment.

These are some of the cases in which I have used this new restorative with the best satisfaction. I am well satisfied that we have in this tonic a most valuable medium, one sure to grow in favor as its merits become better known.

—From the Journal of Practical Medicine, New York, Sept., 1897.

ALBERT E. EBERT AT EDITORIAL WORK.

Albert E. Ebert, Ph. M., Ph. D., is one of the best-known retail druggists in the United States, on account of his long service in literary and professional work. He has recently become associated with the editorial staff of the Meyer Brothers Druggist. The doctor has charge of the department of "Working Formulas."

Current Surgical Literature.

T. H. MANLEY, M. D., New York, Editor.

THE FINAL RESULTS AFTER VAGINAL HYSTERECTOMY FOR CANCER.

—Gazette De Gynecologie, 15 Sept., '97.
DR. JACOBS, OF BRUSSELLS.

The question before the Congress deals with all operations for cancer of the uterus, but I shall limit myself to the results observed after hysterectomy for this malady.

Up to the present date—June 1, 1897—I have performed 65 vaginal hysterectomies and four abdominal for uterine cancer, with one death—operative—in vaginal hysterectomy, and two in abdominal. The death after the vaginal ensued in consequence of rupture of a varicose vein; in the abdominal, one, from pulmonary complication on ninth day, and one from peritonitis.

In 69 cases of uterine cancer, in 58 it was limited to the neck, and in 11 it involved the body of the uterus.

The following includes the final results:

Ten have been lost from view.

Fifty returned to report 39 recurrences, 4 alive after two years, seven at the end of one year. The other cases are too recent to report on final results.

In order to determine final results it is necessary to consider age, with the seat and extent of lesion.

The greater number of these cases come to the surgeon only when the disease has made considerable headway, the system is reduced and healing is prolonged.

The average practitioner has such a horror of surgical extirpation that he exhausts the resources of medicine before referring these cases to the operator. This is one reason why so many operations on them are useless.

However little encouragement this class may offer he regards them as preferable to uterine extirpation when the annexes, the cellular tissues and pelvic lymphatics are not invaded.

AGE OF PATIENT.

The age of the patient is a matter of prime importance, for on this point we have formal convictions.

Whatever may be the extent of the lesion, rapidity of relapse after operation is always the greater the younger the subject.

From 20 to 35 is the most favorable age for medical surgery; but how often we see evidence of fresh invasion, actually before cicatrization is complete—the sad cortege of symptoms appear and we are impotent to arrest them. Tissues but shortly before apparently healthy are now indiscriminately seized on as the broad ligament and the peri-uterine tissues.

We may notice the same epithelial activity in the parturient and recently delivered, who have cancer.

AFTER THE MENOPAUSE.

In my opinion intervention is seldom justified from the menopause to 60.

In this class palliative treatment will prolong life to a greater extent of time than radical operation. In these the march of the disease is slow and insidious, there is little pain and the disease is widespread before detected.

We should not forget that hysterectomy at this age is an operation of gravity and its therapeutic results are most discouraging.

Below is a table of cases operated on:

Age.	No. of Cases.	Mortality.	Relapses.	Cures.
20 to 30	18	0	8 in two months 4 in 5 months 5 in 8 months 1 after year 18 relapses.	1 cured for one year.
35 to 45	37	2	11 lost sight of 9 in one month 5 in 6 months. 5 in 12 months. 2 in 10 months 24 relapses.	2 well after 2 years.
45 to 55	12	1	7 relapses before end of first year 4 during the second year.	
55 to 70	2	0	1 relapse in five months 1 relapse in 11 months.	

In those 69 cases there were but two in which there was absence of return after two years. The microscope left no doubt as to the nature of the lesion in all of them.

Not a single one which I have operated on has survived four, five, six, seven or eight years. Every one died sooner or later from a generalization of the disease. My therapeutic balance sheet of these cases of cancer treated by hysterectomy is miserable.

Definite records on the relative number and date of relapses are difficult to secure.

The unfortunate patient, conscious of the return of the malady, often in despair fails to report, or enters another's practice.

Table showing relation of age to rapidity of recurrence:

Relapse one month after operation, five cases, 21, 22, 24, 25 years.
Relapse two months after operation, three cases, 27, 30, 41 years.
Relapse three months after operation, 10 cases, 30, 32, 33, 35, 51, 70 years.
Relapse five years after operation, four cases, 27, 33, 47, 56 years.
Relapse six months after operation, eight cases, 29, 31, 35, 36, 38 years.
Relapse 10 months after operation, seven cases, 36, 37, 30, 40, 41, 42 years.
Relapse 12 months after operation, six cases, 26, 36, 42, 43, 45, 49 years.
Relapse 18 months after operation, two cases, 49, 50 years.
Relapse two years after operation, four cases, 50, 56, 57, 59 years.
Relapse three years after operation, five cases, 46, 49, 51.

In all these cases relapse set in by infiltration of the pelvic tissues and the vaginal walls. In only two have I witnessed return without involving the vagina. Death usually followed from one to three months after first signs of relapse set in.

In one case patient survived seven months, with two large cloacal opening widely the bladder and rectum into the vagina.

ANALYSIS.

An analysis of these tables show that hysterectomy for uterine cancer under 35 years of age presents deplorable results, for in those under that age, no matter however favorable may be the conditions for operation, with few exceptions the disease reappeared from three to seven months after operation.

However sad may be the results we must not entirely proscribe this operation, as for example when hemorrhage is abundant or the pain is great.

No surgeon is warranted in urging an operation of so formidable a character as hysterectomy for a therapeutic result, which is often perfectly "nil."

We have seen relapse with terrible rapidity in those under 35, even when it was supposed enucleation was quite radical.

From 35 to 55 operation may be entirely degitimate as a palliative measure. After this age we would do well to restrict our treatment to a tentative therapy. We often see old people with cancer of the uterus for months and years in entire ignorance of their presence.

CONCLUSIONS.

We may say practically that vaginal hysterectomy has no mortality, and abdominal to-day gives us quite the same guarantee.

But we are convinced that the mode of operating is of no consequence in cancer.

It may finally be said that wherever cancer is situated, after extirpation relapse is inevitable in the present state of our knowledge of its therapy, and radical cure to-day is the "exception."

Operation, as it stops hemorrhage, relieves pain and suppresses the

ichorous discharge, should not be refused the patient.

Cancer of the uterus, however treated, is progressively fatal, although, everything considered, hysterectomy is perhaps among the best of palliative remedies.

HOW TO SECURE ASEPSIS IN CASES OF BURNS.

Dr. C. K. Cole, of Helena, Mont., (Columbus Med. Jour., Sept. 14, 1897) states that of prime importance in the treatment of burns is the necessity of making the involved portion as nearly as possible aseptic. "To accomplish this, the clothes having been removed in a warm room, all blebs should be punctured, shreds of clothing and other debris carefully washed and mopped with some mild germicidal solution, preferably boro-salicylic solution, or the standard Thiersch's solution, the whole carefully enveloped in multiple layers, first of borated lint and absorbent cotton, covered with rubber tissue, with either bichloride or iodoform gauze (constituting the outer layers) held in place lightly by a few turns of a roller bandage. Among the newer remedies applicable in these cases there is one much vaunted and very justly so. I refer to europhen, which may be used in the form of powder, gauze, or a 3 to 5 per cent. ointment. With reference to the latter preparation (the ointment), while it is almost uniformly recommended, I seriously question whether its use is consistent with strict antisepsis. Europhen has the advantage over iodoform of being non-odorous, practically devoid of danger from toxic effects and, according to some authorities, is better than iodoform in promoting rapid healing, especially in suppurating cases. The exclusion of atmospheric air is sine qua non."

QUACKS AND GULLS.

The following story, which I take from a French newspaper, well illustrates that particular twist in the brain of "this foolish-compounded clay, man," which leads so many otherwise fairly intelligent folks to place more reliance on quacks than on qualified medical practitioners. In a fashionable quarter of Paris one "Alexis" does a roaring trade as a bone setter and herbalist. To him one fine day there came a Commissioner of Police with an invitation to follow him to his office. The quack took the matter quite coolly and, while preparing to obey the summons of the law, said to his servant, "Don't send anyone away; I shall be back in a few minutes." The representative of the civil power hinted with a significant smile that his return might possibly be a little delayed. On arriving at the police office "Alexis" asked the Commissioner for a moment's private interview. This, after some demur, was granted. When they were alone "Alexis" took from his pocket a diploma of Doctor of Medicine of the most authentic character, at the same time begging the astonished Commissioner not to betray his secret on the ground that he would lose all his practice if it were known that he was a regularly qualified doctor. He added by way of explanation that he had tried practice in the orthodox way and had nearly starved behind his brass plate. An inspiration came to him to start as a quack. He removed his plate, dropped his surname, gave himself out for a bone setter—and he might have added, pointing to his rooms crowded with patients, "Si monumentum quoeris, circumspice!" This interesting story carries its truth on its face. I do not know whether "Alexis," doctor though he be, has much knowledge of medicine, but he evidently knows mankind.

—The Practitioner.

GONORRHEAL PERITONITIS IN A CHILD.

Mejia publishes a full account of a well-marked case of this disease. A child, aged 5, had suffered for over a fortnight from a very free vaginal discharge. Severe abdominal pain set in a week later, then continual vomiting, and at last the child was brought into hospital; she was clearly moribund. Tympanitic distension was extreme. Pain was so great that palpation was almost

useless, yet there seemed to be fluctuation in the hypogastrium and iliac fossae. After death the peritoneal cavity was found to contain a quantity of pus which contained the gonococcus, also the bacterium coli. The distended intestines were glued together by adhesions, but showed no signs of disease of their muscular and mucous coats. The appendix vermiformis was free from any lesion. The ovaries and tubes were adherent. It is significant that the abdominal orifice of each tube was patent; pus exuded on pressure. The other viscera were healthy, excepting that there was slight edema of the bases of the lungs.

—These de Paris, 1897.

RECOVERY WITHOUT OPERATION FROM A PENETRATING GUNSHOT WOUND OF THE ABDOMEN.

Ruotte publishes a case of gunshot wound of the abdomen, in which recovery followed an expectant treatment, necessitated in the first instance by the absence of skilled help and by the surroundings of the patient, and the objection raised by the parents to removal to hospital. The injury had been caused by the accidental discharge at a distance of a few inches of a gun loaded with large shot. The wound, which was about one inch in length, and had undoubtedly extended into the abdominal cavity, was situated a little below and to the outer side of the umbilicus. Wounding of the intestine was proved by an occasional escape of gas, by a greenish discharge from the wound after the third day, which was increased soon after feeding. The patient, a lad aged 12 years, who was treated by a very restricted and fluid diet, by the application of ice to the abdomen, and by the occasional administration of opium, made a speedy recovery without any indications of peritonitis, and was able to return to school within a month from the date of the accident. The author acknowledges that the good result in this case was very exceptional and unexpected, and expresses his conviction, based upon an extensive experience of gunshot wounds, that even when the peritoneal cavity has been penetrated by multiple projectiles surgical intervention is indicated provided it can be applied under those conditions that are indispensable for its success.

—Archiv. Provin. de Chir., October, '97.

DUPUYTREN'S CONTRACTION.

Fere brings forth several facts in support of the view that retraction of the palmar fascia is due to some predisposing constitutional condition, and that traumatism and external irritation play but a subordinate part as mere exciting causes. The symmetry of the lesions, which is one of the most frequent characters of the affections, favors this view. Moreover, the contraction is often associated with general conditions marked by trophic disturbances. Rheumatism and herpetism have often been noted in the hereditary and personal antecedents of the subjects of this affection, and many authors have pointed out its occasional association with gout. It has also been observed, though less frequently, in diabetic patients. Allusion is made to its occasional coincidence with induration of the fibrous sheath of the penis, an instance of which is published by the author. Palmar contraction is sometimes met with in cases of nerve affections, such as tabes, epilepsy and general arthritic paralysis. The author recognizes the influence, which, however, is regarded as only exciting, of traumatism, and points out in favor of such influence the almost constant commencement of the contraction in the fourth and little fingers. A case, however, is here recorded in which the affection commenced on both sides in the thumb.

—Rev. de Chirurg.

Therapeutics.

TREATMENT OF ECZEMA BY PICRIC ACID.

Brousse recommends the employment of picric acid in some cases of eczema, the indications being an acute attack, either primarily, or supervening on a chronic, particularly should there be any tendency to epidermic ulcerations, and in the seborrheic or impetiginous eczema of children. But the method is contraindicated in chronic cases, and generally in those accompanied by epidermic tlickening, though should there be much itching in the latter it may prove beneficial. The method of employment is as follows: A saturated solution of picric acid (12 g. of the acid dissolved in 1 litre of tepid water, allowed to become cold and decanted), is painted on the affected parts with a brush, the application extending slightly beyond the limits of the eczematous area, then covered immediately with absorbent wool, or it may be with a compress soaked in the same solution, and over which the wool is applied. This is allowed to remain on for about two days. An indispensable precaution would seem to be previous cleansing of the skin with some antiseptic, so that no suppurative organisms may be allowed to remain in contact with the diseased skin during the time that it is covered by the wool dressing. The staining due to picric acid may subsequently be removed by washing in a saturated solution of lithia carbonate.

—Journ. de Med., October 10, '97.

HEAT AS A THERAPEUTIC AGENT.

Bosanyi commences a study of this subject. He first refers to the disputed question of the superiority of the natural hot springs over the artificial substitutes. Hot baths have been used with success in puerperal eclampsia, and hot douches and applications have been found of value in certain diseases of women. The author then refers to the treatment of anemia by diaphoresis and bleeding, which he appears to look upon as a possible substitute for the iron treatment. In the acute infective diseases such as diphtheria, cholera, influenza, hot baths, or the local application of heat, has proved to be of service. Epidemic cerebrospinal meningitis has been treated with remarkably good results by baths at 36 degrees to 41 degrees C. In certain skin diseases, mostly chronic, the hot bath is a valuable remedy. In some circulatory diseases with dropsy diaphoretic baths are serviceable. The use of heat as a therapeutic agent has undoubtedly its limits, and under some circumstances is contraindicated. The author refers to the quickening of vital processes under its action. Chronic diseases are those which are most adapted to this treatment.

—Pester med.-chir. Presse, Oct. 24, '97.

SALINE INJECTIONS IN INFANTILE CHOLERA.

Loin, of Brussels, in children from 6 weeks to 3 months old, the subjects of infantile cholera resisting all sorts of treatment, has had recourse to subcutaneous injections of normal saline solution in doses of 50 c. cm. morning and evening. After the first and second injection the frequency of the stools diminished, they began to regain their normal consistence and appearance, and in a few days the patients recovered.

—Sem. Med., clxxvi.

POTASSIUM CHLORATE POISONING.

P. Jacob records a fatal case. A patient aged 39 was admitted almost comatose, 30 hours after taking about 25 g. of this drug. The face, ears, fingers and toes were blue. There was much dyspnea and the pulse was thready. Camphor injections were given and the stomach washed out with water to which sodium bicarbonate had been added. Venesection was performed on two occasions, and 1000 c. cm. normal saline solution was infused. Some considerable improvement was noted on the third day; 50 c. cm. urine of a brown-red color was drawn off and was found to contain both albumen and blood. From the time of admission a marked methemaglobinuria existed, but after the second day a distinct hemoglobinuria. Six days after taking the poison the patient died suddenly and unexpectedly. Only an incomplete necropsy could be made fifty hours after death. The spleen was enlarged, the lungs deeply engorged with blood, and the kidneys swollen. The changes in the blood were interesting. There was a very marked leucocytosis at first. The red cells were paler than usual, and showed marked degenerative changes. The leucocytosis gradually diminished, so that on the day of death the leucocytes did not exceed the normal, but the changes in the red cells gradually increased, so that eventually hardly a normally colored red cell was to be seen. The red cells which escaped the destructive changes nearly all showed poikilocytosis. The author's observations thus agree with those of Riess and Kronig. The hyperleucocytosis is a reactive change. The author would go so far as to say that he use of potassium chlorate, even as a gargle, should be entirely given up and forbidden. Even in small doses it is a severe blood poison and may produce a hemorrhagic nephritis.

—Berl. klin. Woch., July 5, 1897.

ACETONURIA.

Nebelthau relates an exceptional case in a woman who was much wasted. There was no evidence of visceral disease, and there was no sugar in the urine. The breath smelt of acetone, and the urine gave a most marked reaction of aceta-acetic acid. There was vomiting, and the vomit also contained acetone. An investigation was made into the metabolism of this case. In the first, or comparatively fasting period, acetone, aceto-acetic acid, oxybutyric acid and ammonia were found. The acetonuria was not so marked as in a severe case of diabetes, but exceeded the amount usually present when the patient is dieted. The amount of urine was small, and hence a considerable excretion of acetone occurred through the lungs. The urine contained during this period albumen and casts. Cases of intestinal intoxication have been recorded where there has been albuminuria with casts, as well as acetonuria. The total nitrogenous excretion was very low in the first period; the patient had taken very little food for some three years past. In the second period the vomiting was controlled by means of cocaine and suggested treatment, and a sufficient amount of food was taken. Now there was considerable nitrogenous retention, and the weight increased. With the sufficient nutrition the smell of acetone in the breath, the reaction with ferric chloride in the urine, and the increased ammonia excretion disappeared. It seemed to be a case of hysterical anorexia and vomiting, with consequent inanition. Thus a considerable excretion of acetone (4 g. in the day) may exist without producing much disturbance of the general condition.

—Centralb. f. inn. Med., Sept. 25, '97.

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...TO...

VOL. XXXIV.

July 1st, to December 31st

1897

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